Service
Service
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Product Service Group CE Audio

Service Information

(GB)

To adapt the service manual the following sheets have been added/changed.

(NL)

Voor het aanpassen van de service manual zijn de onderstaande pagina's toegevoegd/gewijzigd.

(F)

Afin de pouvoir adapter le "manual service" les feuillets suivants ont été soit modifiés, soit ajoutés.

(D)

Zür anpassung des Service Manual sind die nachstehenden Seiten hinzugefügt/geändert.

(I)

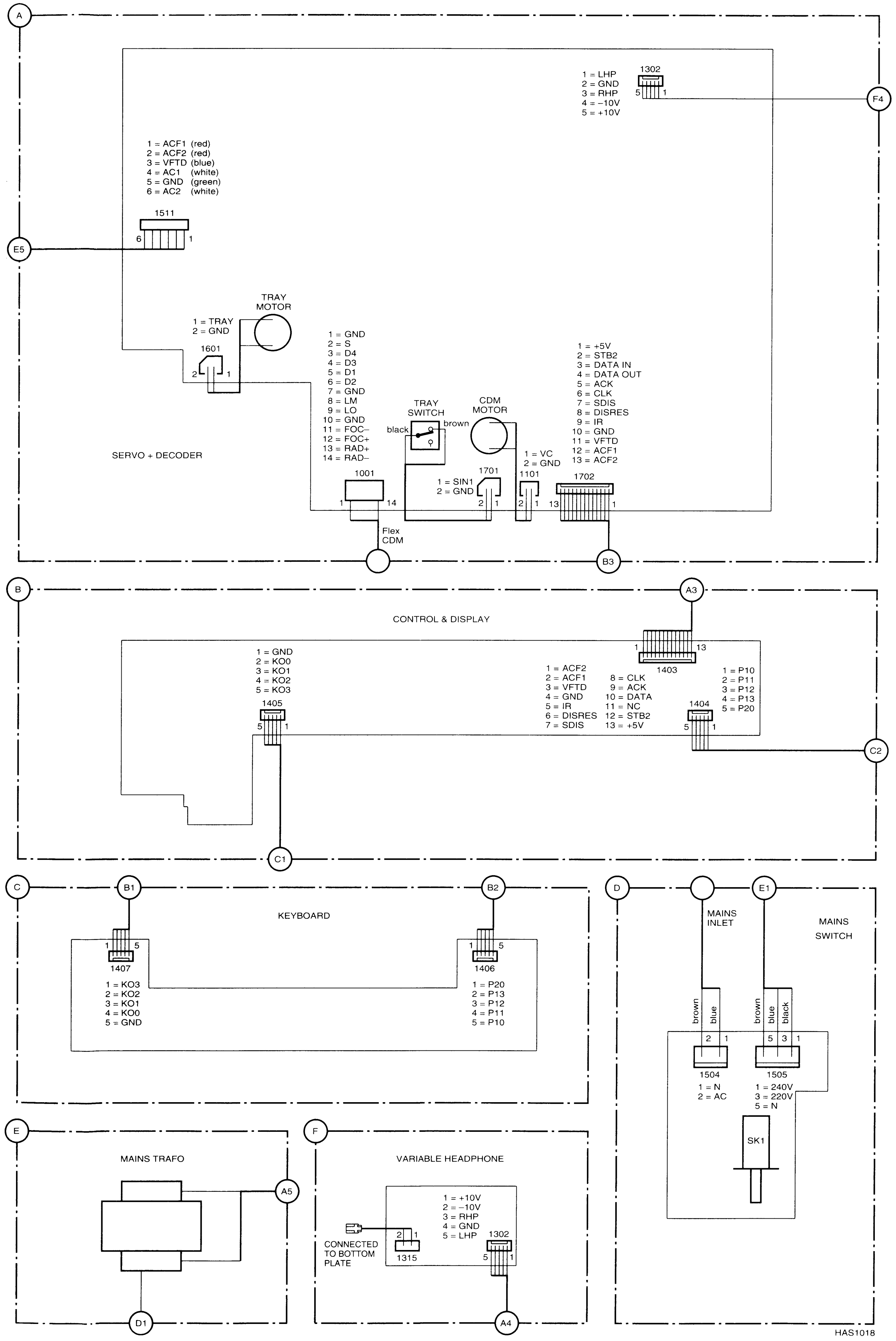
Le seguenti pagine sono state cambiate/aggiunte allo scopo di adattare il Manuale di Servizio.

15-1, 16-1
17-1, 18-1
21-1, 22-1, 23-1
24-1, 25-1, 26-1
27-2, 28-2, 29-2
30-2, 31-2, 32-2
51b, 52b, 53b, 54a, 55a
56a

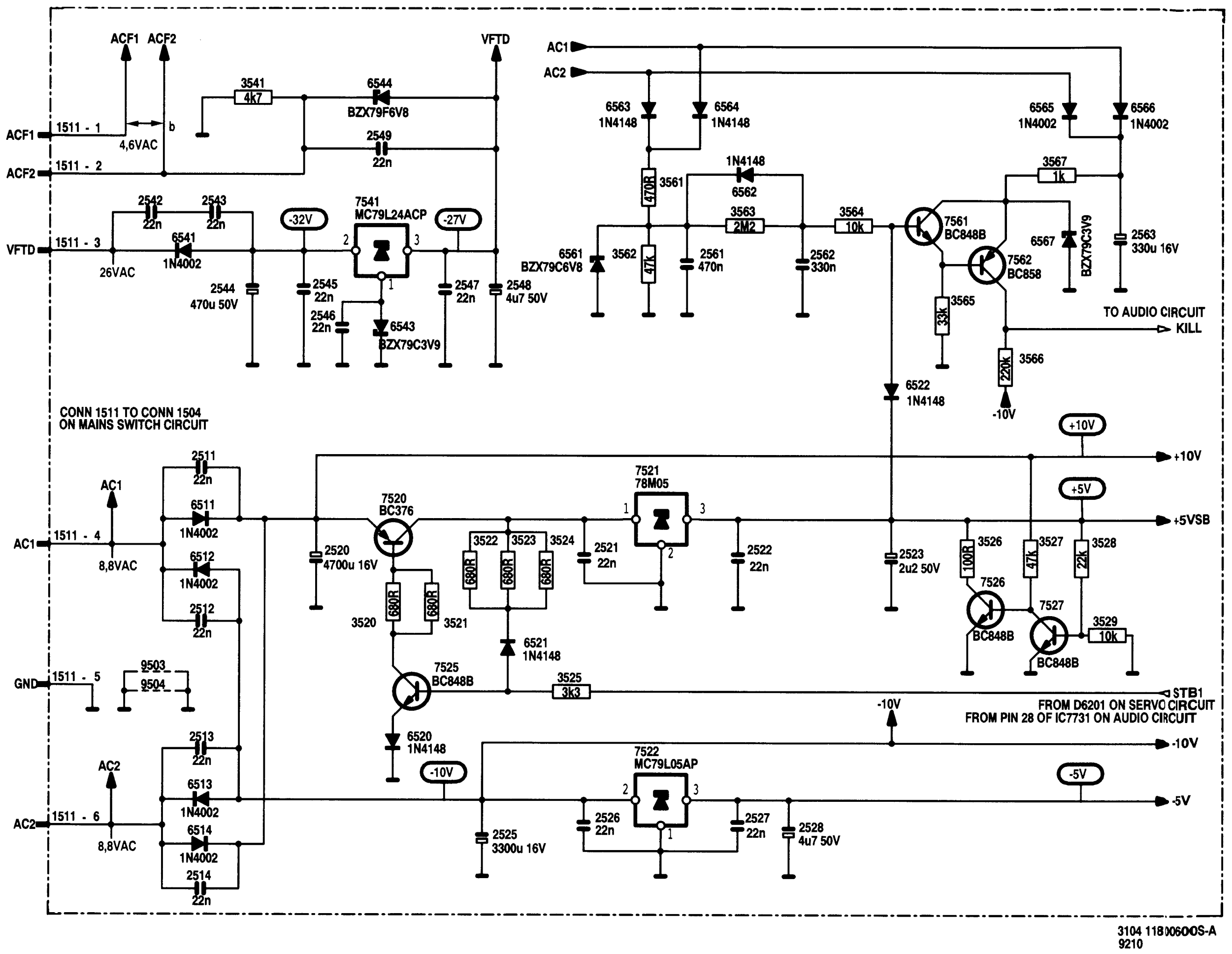
1993-06-02

4822 725 24036

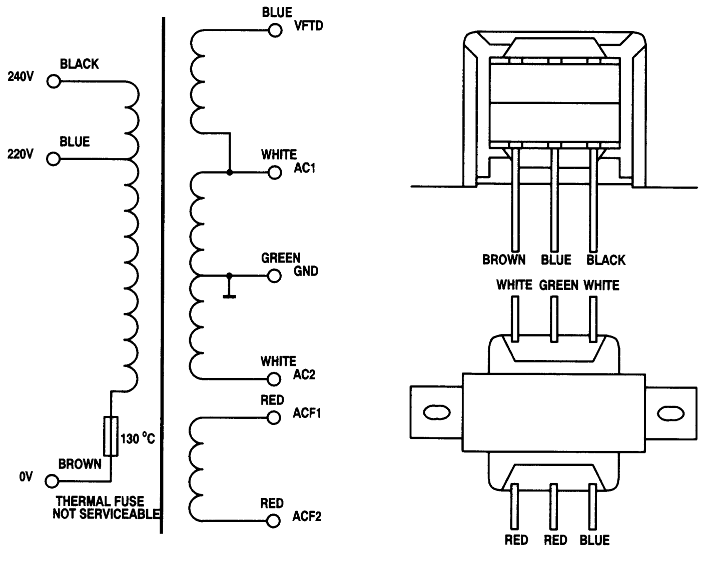
WIRING DIAGRAM II


SERVO + DECODER
1 = LHP
2 = GND
3 = RHP
4 = −10V
5 = +10V
1302
1 = ACF1 (red)
2 = ACF2 (red)
3 = VFTD (blue)
4 = AC1 (white)
5 = GND (green)
6 = AC2 (white)
1511
TRAY MOTOR
1 = TRAY
2 = GND
1601
1 = GND
2 = S
3 = D4
4 = D3
5 = D1
6 = D2
7 = GND
8 = LM
9 = LO
10 = GND
11 = FOC−
12 = FOC+
13 = RAD+
14 = RAD−
TRAY SWITCH
black
brown
CDM MOTOR
1 = VC
2 = GND
1 = SIN1
2 = GND
1001
1701
1101
1702
1 = +5V
2 = STB2
3 = DATA IN
4 = DATA OUT
5 = ACK
6 = CLK
7 = SDIS
8 = DISRES
9 = IR
10 = GND
11 = VFTD
12 = ACF1
13 = ACF2
Flex CDM
CONTROL & DISPLAY
1 = GND
2 = KO0
3 = KO1
4 = KO2
5 = KO3
1405
1 = ACF2
2 = ACF1
3 = VFTD
4 = GND
5 = IR
6 = DISRES
7 = SDIS
8 = CLK
9 = ACK
10 = DATA
11 = NC
12 = STB2
13 = +5V
1403
1404
1 = P10
2 = P11
3 = P12
4 = P13
5 = P20
KEYBOARD
1407
1 = KO3
2 = KO2
3 = KO1
4 = KO0
5 = GND
1406
1 = P20
2 = P13
3 = P12
4 = P11
5 = P10
MAINS INLET
MAINS SWITCH
brown
blue
black
1504
1 = N
2 = AC
1505
1 = 240V
3 = 220V
5 = N
SK1
MAINS TRAFO
VARIABLE HEADPHONE
1 = +10V
2 = −10V
3 = RHP
4 = GND
5 = LHP
1302
1315
CONNECTED TO BOTTOM PLATE
A
B
C
D
E
F
A3
A4
A5
B1
B2
B3
C1
C2
D1
E1
E5
F4
HAS1018

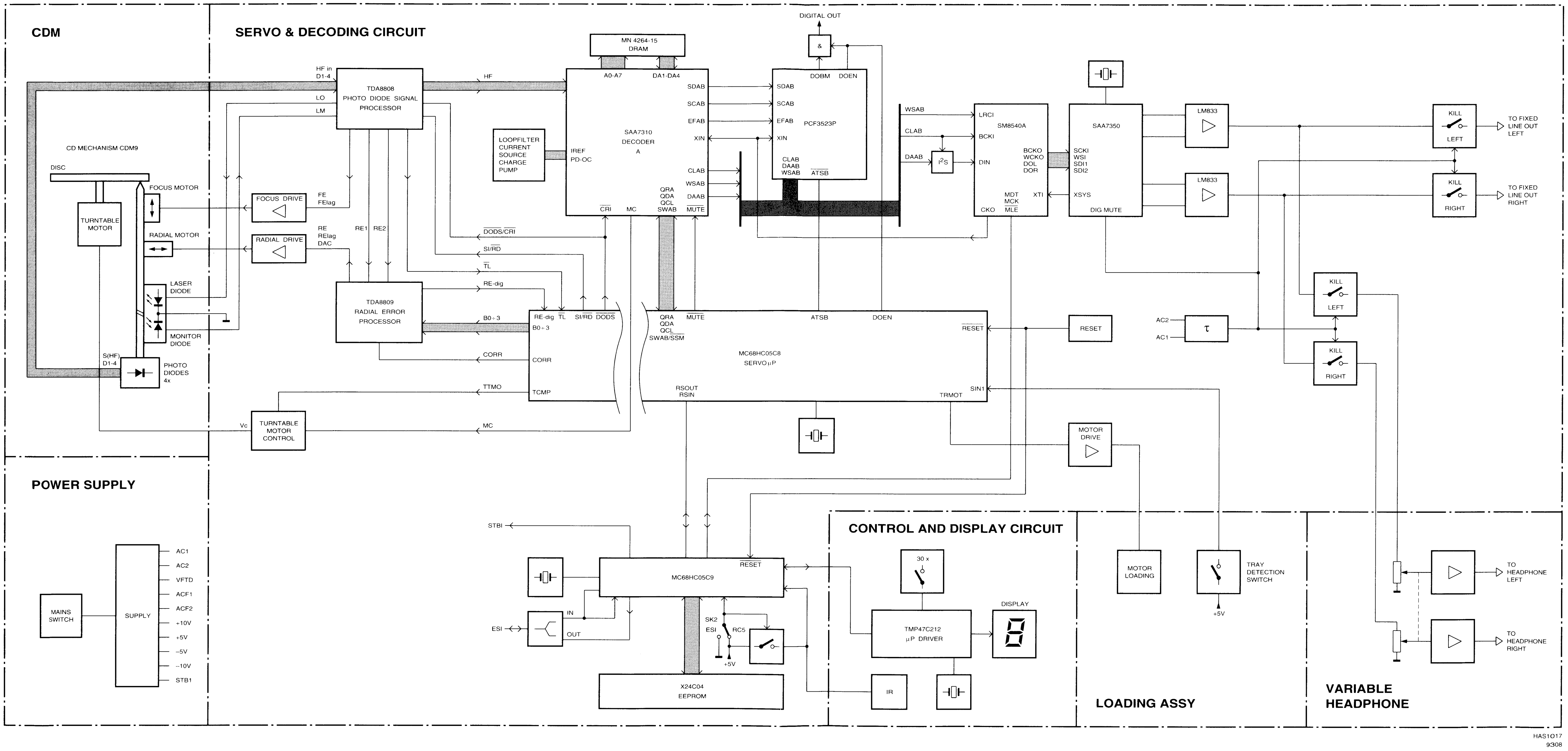
POWER SUPPLY


ACF1
ACF2
VFTD
AC1
AC2
GND
1511 - 1
1511 - 2
1511 - 3
1511 - 4
1511 - 5
1511 - 6
4,6VAC
26VAC
8,8VAC
3541 4k7
6544 BZX79F6V8
2549 22n
2542 22n
2543 22n
6541 1N4002
2544 470u 50V
7541 MC79L24ACP
-32V
-27V
2545 22n
2546 22n
6543 BZX79C3V9
2547 22n
2548 4u7 50V
6563 1N4148
6564 1N4148
3561 470R
6562 1N4148
3563 2M2
3562 47k
6561 BZX79C6V8
2561 470n
2562 330n
3564 10k
7561 BC848B
7562 BC858
3567 1k
6567 BZX79C3V9
6565 1N4002
6566 1N4002
2563 330u 16V
3565 33k
3566 220k
6522 1N4148
-10V
TO AUDIO CIRCUIT
KILL
CONN 1511 TO CONN 1504 ON MAINS SWITCH CIRCUIT
2511 22n
6511 1N4002
6512 1N4002
2512 22n
2520 4700u 16V
7520 BC376
3520
3521
3522 680R
3523 680R
3524 680R
7521 78M05
2521 22n
2522 22n
2523 2u2 50V
6521 1N4148
+10V
+5V
+5VSB
3526 100R
3527 47k
3528 22k
7526 BC848B
7527 BC848B
3529 10k
9503
9504
7525 BC848B
3525 3k3
STB1
FROM D6201 ON SERVO CIRCUIT
FROM PIN 28 OF IC7731 ON AUDIO CIRCUIT
6520 1N4148
2513 22n
6513 1N4002
6514 1N4002
2514 22n
-10V
7522 MC79L05AP
-5V
2525 3300u 16V
2526 22n
2527 22n
2528 4u7 50V
3104 118Ю60О0S-A
9210

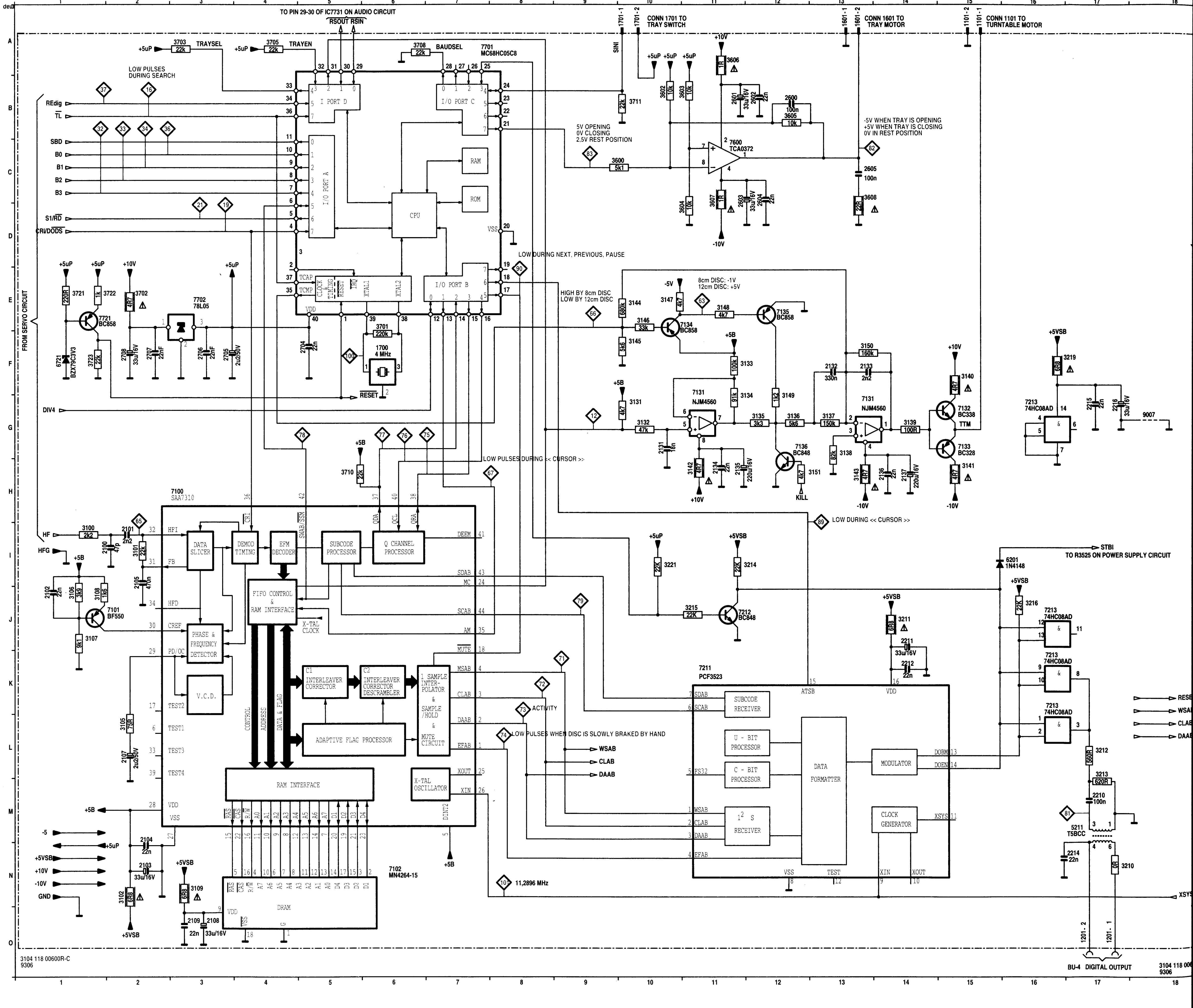
TRANSFORMER CONNECTIONS

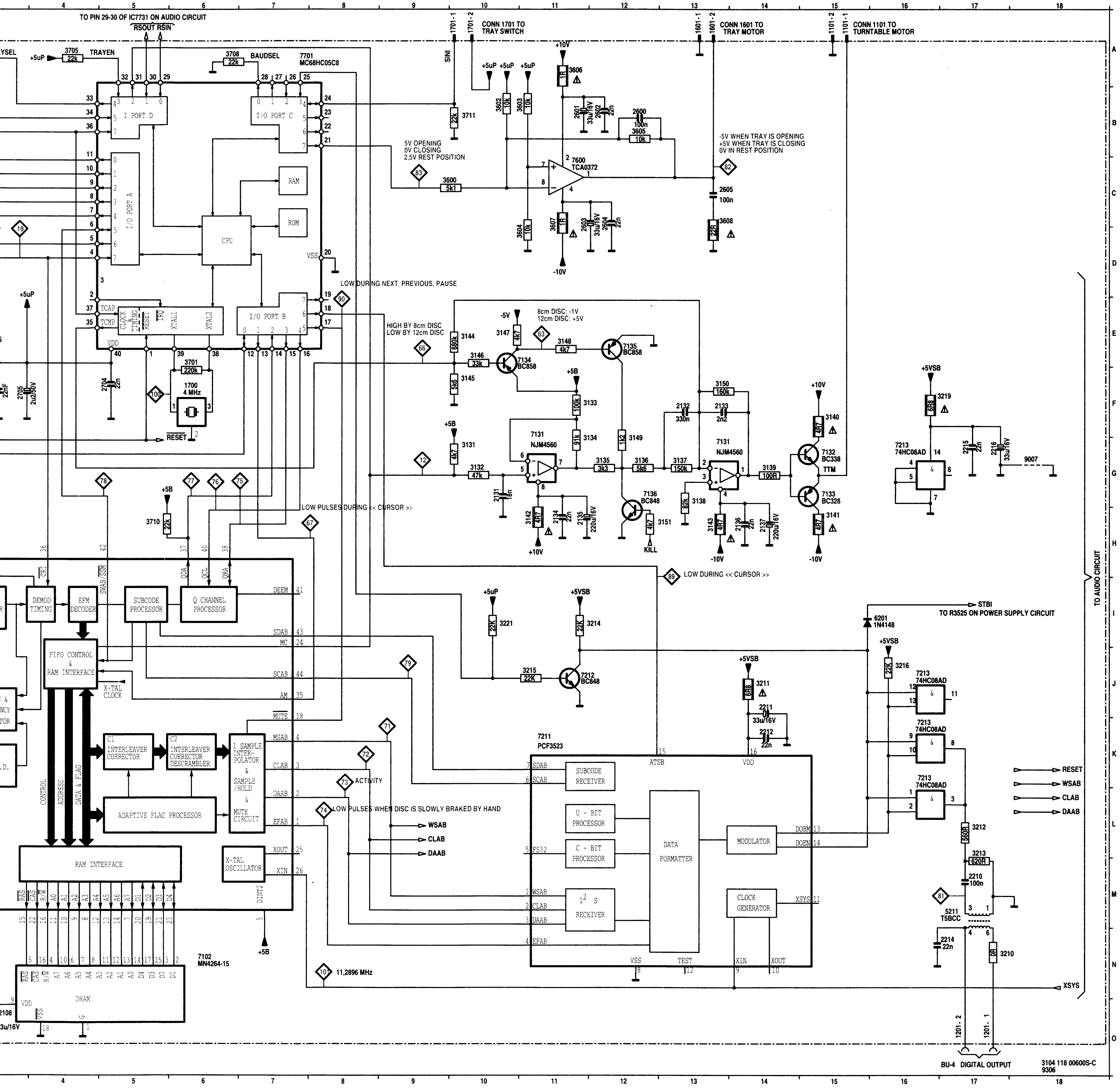

240V
BLACK
220V
BLUE
0V
BROWN
130 °C
THERMAL FUSE NOT SERVICEABLE
BLUE VFTD
WHITE AC1
GREEN GND
WHITE AC2
RED ACF1
RED ACF2
BROWN BLUE BLACK
WHITE GREEN WHITE
RED RED BLUE
HAS1038
9227

BLOCK DIAGRAM II

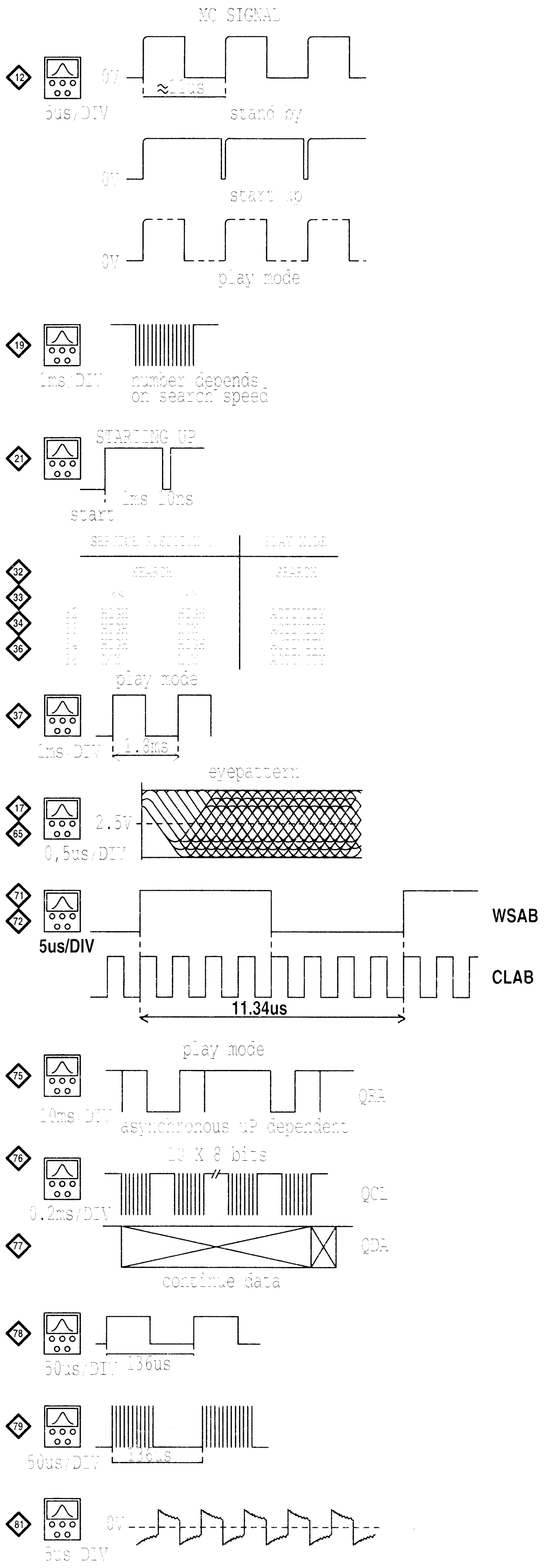

CDM
SERVO & DECODING CIRCUIT
CD MECHANISM CDM9
DISC
TURNTABLE MOTOR
FOCUS MOTOR
RADIAL MOTOR
LASER DIODE
MONITOR DIODE
S(HF) D1-4
PHOTO DIODES 4x
HF in D1-4
LO
LM
TDA8808 PHOTO DIODE SIGNAL PROCESSOR
FOCUS DRIVE
FE FElag
RADIAL DRIVE
RE RElag DAC
RE1
RE2
TDA8809 RADIAL ERROR PROCESSOR
HF
DODS/CRI
SI/RD
TL
RE-dig
B0÷3
CORR
TTMO
MC
Vc
TURNTABLE MOTOR CONTROL
LOOPFILTER CURRENT SOURCE CHARGE PUMP
MN 4264-15 DRAM
A0-A7
DA1-DA4
IREF
PD-OC
SAA7310 DECODER A
SDAB
SCAB
EFAB
XIN
CLAB
WSAB
DAAB
QRA QDA QCL SWAB
MUTE
CRI
MC
DIGITAL OUT
&
DOBM
DOEN
PCF3523P
CLAB DAAB WSAB
ATSB
WSAB
CLAB
DAAB
I²S
LRCI
BCKI
DIN
SM8540A
BCKO WCKO DOL DOR
MDT MCK MLE
XTI
CKO
SAA7350
SCKI WSI SDI1 SDI2
XSYS
DIG MUTE
LM833
LM833
KILL LEFT
KILL RIGHT
TO FIXED LINE OUT LEFT
TO FIXED LINE OUT RIGHT
RE-dig TL SI/RD DODS
B0÷3
CORR
TCMP
QRA QDA QCL SWAB/SSM
MUTE
ATSB
DOEN
MC68HC05C8 SERVO μP
RESET
RSOUT RSIN
TRMOT
SIN1
RESET
AC2
AC1
τ
KILL LEFT
KILL RIGHT
MOTOR DRIVE
POWER SUPPLY
MAINS SWITCH
SUPPLY
AC1
AC2
VFTD
ACF1
ACF2
+10V
+5V
−5V
−10V
STB1
STBI
ESI
IN
OUT
MC68HC05C9
RESET
SK2
ESI
RC5
+5V
X24C04 EEPROM
CONTROL AND DISPLAY CIRCUIT
30 x
TMP47C212 μP DRIVER
DISPLAY
IR
MOTOR LOADING
TRAY DETECTION SWITCH
+5V
LOADING ASSY
TO HEADPHONE LEFT
TO HEADPHONE RIGHT
VARIABLE HEADPHONE
HAS1O17
9308

DECODER CIRCUIT DIAGRAM II

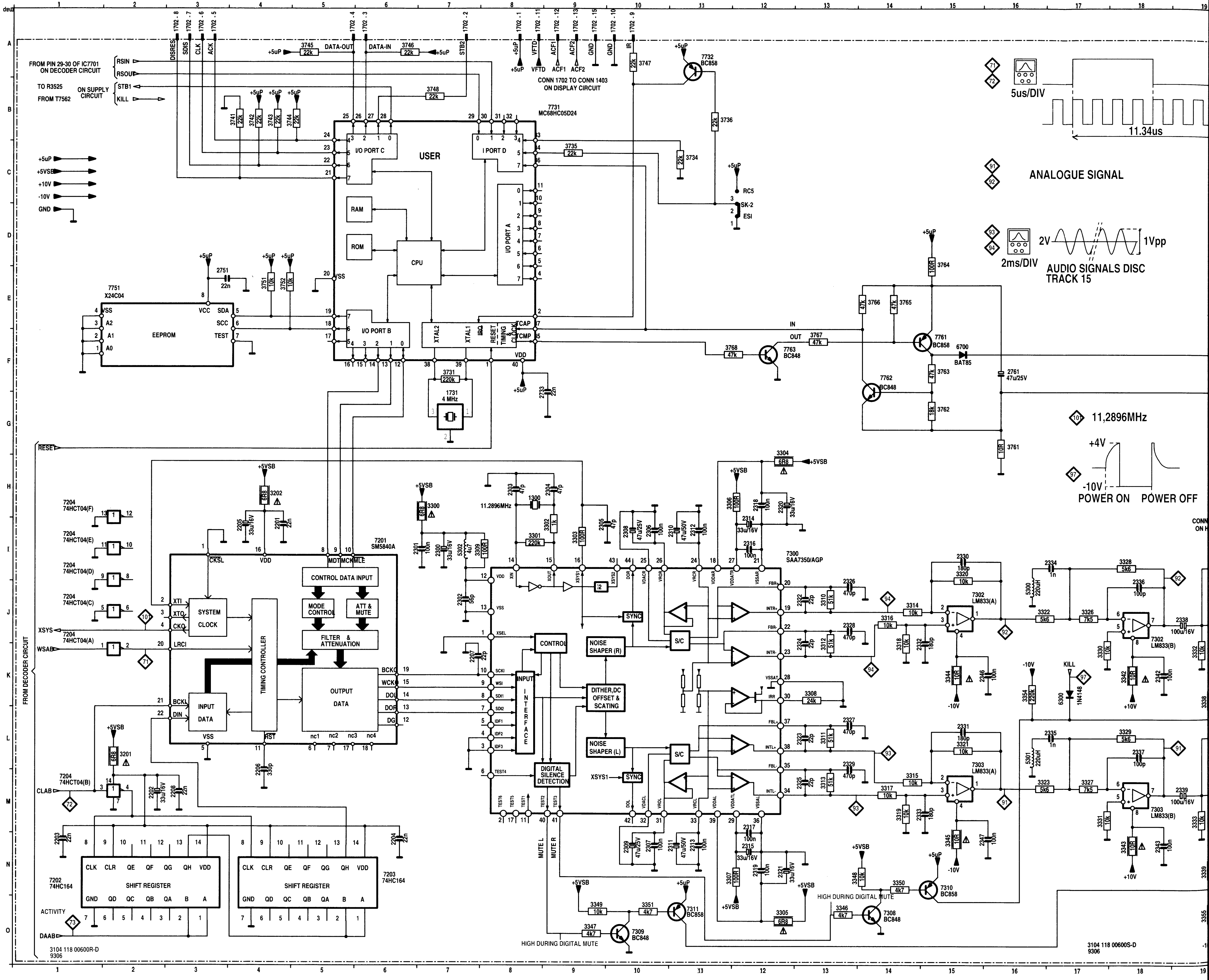

TO PIN 29-30 OF IC7731 ON AUDIO CIRCUIT
RSOUT RSIN
CONN 1701 TO TRAY SWITCH
CONN 1601 TO TRAY MOTOR
CONN 1101 TO TURNTABLE MOTOR
TRAYSEL
TRAYEN
BAUDSEL
7701
MC68HC05C8
I PORT D
I/O PORT C
I/O PORT A
I/O PORT B
RAM
ROM
CPU
LOW PULSES DURING SEARCH
REdig
TL
SBD
B0
B1
B2
B3
S1/RD
CRI/DODS
FROM SERVO CIRCUIT
DIV4
RESET
7702
78L05
7721
BC858
6721
BZX79C3V3
1700
4 MHz
5V OPENING
0V CLOSING
2.5V REST POSITION
7600
TCA0372
-5V WHEN TRAY IS OPENING
+5V WHEN TRAY IS CLOSING
0V IN REST POSITION
LOW DURING NEXT, PREVIOUS, PAUSE
HIGH BY 8cm DISC
LOW BY 12cm DISC
8cm DISC: -1V
12cm DISC: +5V
7134
BC858
7135
BC858
7131
NJM4560
7136
BC848
7132
BC338
7133
BC328
TTM
KILL
LOW PULSES DURING << CURSOR >>
LOW DURING << CURSOR >>
7100
SAA7310
HF
HFG
7101
BF550
DATA SLICER
DEMOD TIMING
EFM DECODER
SUBCODE PROCESSOR
Q CHANNEL PROCESSOR
FIFO CONTROL & RAM INTERFACE
X-TAL CLOCK
PHASE & FREQUENCY DETECTOR
V.C.D.
C1 INTERLEAVER CORRECTOR
C2 INTERLEAVER CORRECTOR DESCRAMBLER
1 SAMPLE INTER-POLATOR & SAMPLE /HOLD & MUTE CIRCUIT
ADAPTIVE FLAG PROCESSOR
RAM INTERFACE
X-TAL OSCILLATOR
CONTROL
ADDRESS
DATA & FLAG
DEEM
SDAB
MC
SCAB
AM
MUTE
MSAB
CLAB
DAAB
EFAB
XOUT
XIN
ACTIVITY
LOW PULSES WHEN DISC IS SLOWLY BRAKED BY HAND
WSAB
CLAB
DAAB
11,2896 MHz
7102
MN4264-15
DRAM
-5
+5uP
+5VSB
+10V
-10V
GND
+5B
7211
PCF3523
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
I² S RECEIVER
DATA FORMATTER
MODULATOR
CLOCK GENERATOR
7212
BC848
6201
1N4148
STBI
TO R3525 ON POWER SUPPLY CIRCUIT
7213
74HC08AD
9007
5211
T5BCC
RESE
WSAI
CLAE
DAAE
XSYS
BU-4 DIGITAL OUTPUT
3104 118 00600R-C
9306

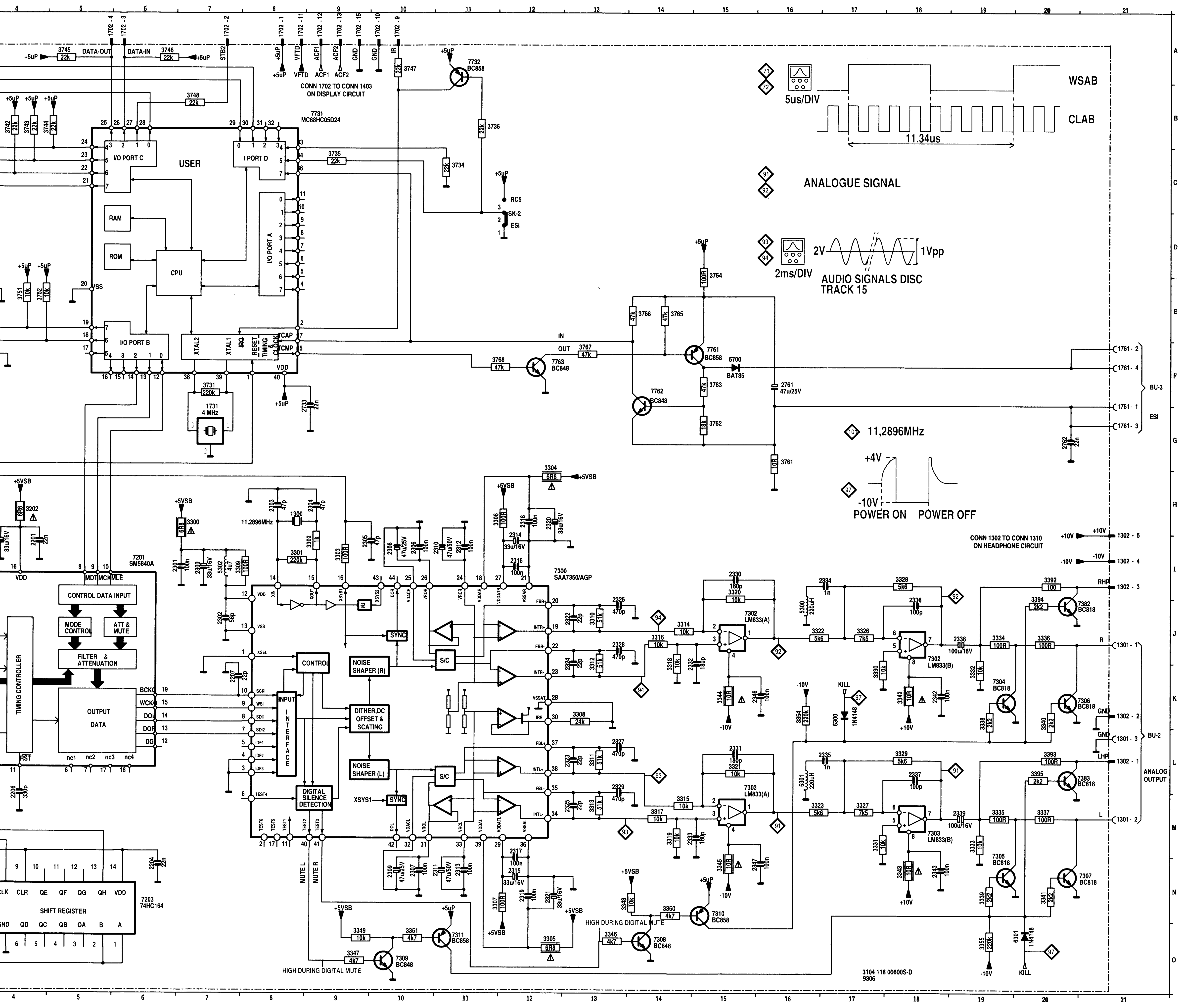

TO PIN 29-30 OF IC7731 ON AUDIO CIRCUIT
RSOUT RSIN
TRAYEN
BAUDSEL
7701
MC68HC05C8
I PORT D
I/O PORT C
I/O PORT A
RAM
ROM
CPU
I/O PORT B
TCAP
TCMP
XTAL1
XTAL2
RESET
1700
4 MHz
CONN 1701 TO TRAY SWITCH
CONN 1601 TO TRAY MOTOR
CONN 1101 TO TURNTABLE MOTOR
5V OPENING
0V CLOSING
2,5V REST POSITION
7600
TCA0372
-5V WHEN TRAY IS OPENING
+5V WHEN TRAY IS CLOSING
0V IN REST POSITION
LOW DURING NEXT, PREVIOUS, PAUSE
HIGH BY 8cm DISC
LOW BY 12cm DISC
8cm DISC: -1V
12cm DISC: +5V
7134 BC858
7135 BC858
7131 NJM4560
7136 BC848
7132 BC338
7133 BC328
TTM
KILL
LOW PULSES DURING << CURSOR >>
LOW DURING << CURSOR >>
7213 74HC08AD
9007
DEMOD TIMING
EFM DECODER
SUBCODE PROCESSOR
Q CHANNEL PROCESSOR
FIFO CONTROL & RAM INTERFACE
X-TAL CLOCK
C1 INTERLEAVER CORRECTOR
C2 INTERLEAVER CORRECTOR DESCRAMBLER
1 SAMPLE INTER-POLATOR & SAMPLE /HOLD & MUTE CIRCUIT
ADAPTIVE FLAG PROCESSOR
RAM INTERFACE
X-TAL OSCILLATOR
CONTROL
ADDRESS
DATA & FLAG
DEEM
SDAB
MC
SCAB
AM
MUTE
MSAB
CLAB
DAAB
EFAB
XOUT
XIN
7212 BC848
7211 PCF3523
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
DATA FORMATTER
I2 S RECEIVER
MODULATOR
CLOCK GENERATOR
ATSB
VDD
VSS
TEST
DOBM
DOEM
XSYS
ACTIVITY
LOW PULSES WHEN DISC IS SLOWLY BRAKED BY HAND
WSAB
CLAB
DAAB
STBI
TO R3525 ON POWER SUPPLY CIRCUIT
6201 1N4148
RESET
WSAB
CLAB
DAAB
XSYS
11,2896 MHz
7102 MN4264-15
DRAM
5211 T5BCC
BU-4 DIGITAL OUTPUT
TO AUDIO CIRCUIT
3104 118 00600S-C
9306

1101	A15
1101	A15
1201	O17
1201	O17
1601	A13
1601	A13
1700	F 6
1701	A10
1701	A10
2100	I 2
2101	I 2
2102	J 1
2103	N 2
2104	M 2
2105	I 2
2107	L 2
2108	O 3
2109	O 3
2131	G10
2132	F13
2133	F13
2134	H11
2135	H11
2136	H14
2137	H14
2210	M17
2211	J14
2212	K14
2214	N17
2215	G17
2216	G17
2600	B12
2601	B11
2602	B12
2603	C11
2604	C12
2605	C13
2704	F 5
2705	F 3
2706	F 3
2707	F 2
2708	F 2
3100	I 1
3101	I 2
3102	N 2
3105	L 2
3106	J 1
3107	J 1
3108	J 1
3109	N 3
3131	G10
3132	G10
3133	F12
3134	G12
3135	G12
3136	G12
3137	G13
3138	G13
3139	G14
3140	F15
3141	H15
3142	H11
3143	H13
3144	E10
3145	F10
3146	E10
3147	E10
3148	E11
3149	G12
3150	F13
3151	H13
3210	N17
3211	J14
3212	L17
3213	L17
3214	I12
3215	J11
3216	J16
3219	F17
3221	I10
3600	C10
3602	B10
3603	B11
3604	D11
3605	B12
3606	A11
3607	C11
3608	C13
3701	E 6
3702	E 2
3703	A 3
3705	A 4
3708	A 6
3710	H 5
3711	B10
3721	E 1
3722	E 2
3723	F 1
5211	M17
6201	I16
6721	F 1
7100	H 3
7101	J 2
7102	N 6
7131	F11
7131	G13
7132	G15
7133	G15
7134	E10
7135	E12
7136	G12
7211	K11
7212	J11
7213	G16
7213	J16
7213	K16
7213	K16
7600	C11
7701	A 7
7702	E 3
7721	E 1
9007	G18
9129	A10


MC SIGNAL
12
0V
≈11us
5us/DIV
stand by
start up
play mode
19
1ms/DIV
number depends on search speed
21
STARTING UP
1ms 10ms
start
32
33
34
36
play mode
37
1ms/DIV
1.8ms
17
65
eyepattern
2.5V
0,5us/DIV
71
72
5us/DIV
WSAB
CLAB
11.34us
75
play mode
10ms/DIV
QRA
asynchronous uP dependent
76
10 X 8 bits
0.2ms/DIV
QCL
77
QDA
continue data
78
50us/DIV
136us
79
50us/DIV
81
0V
5us/DIV

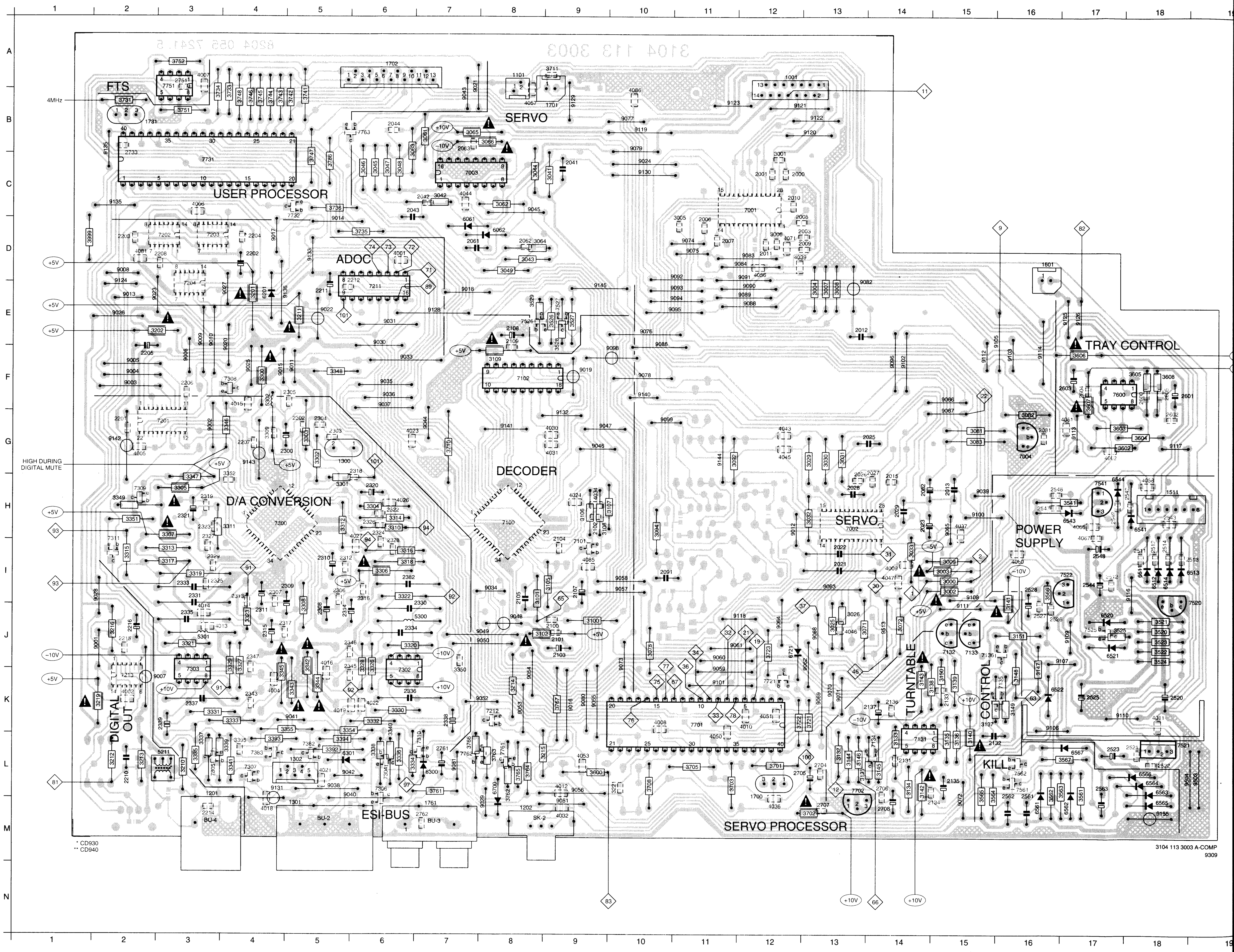
AUDIO CIRCUIT DIAGRAM II

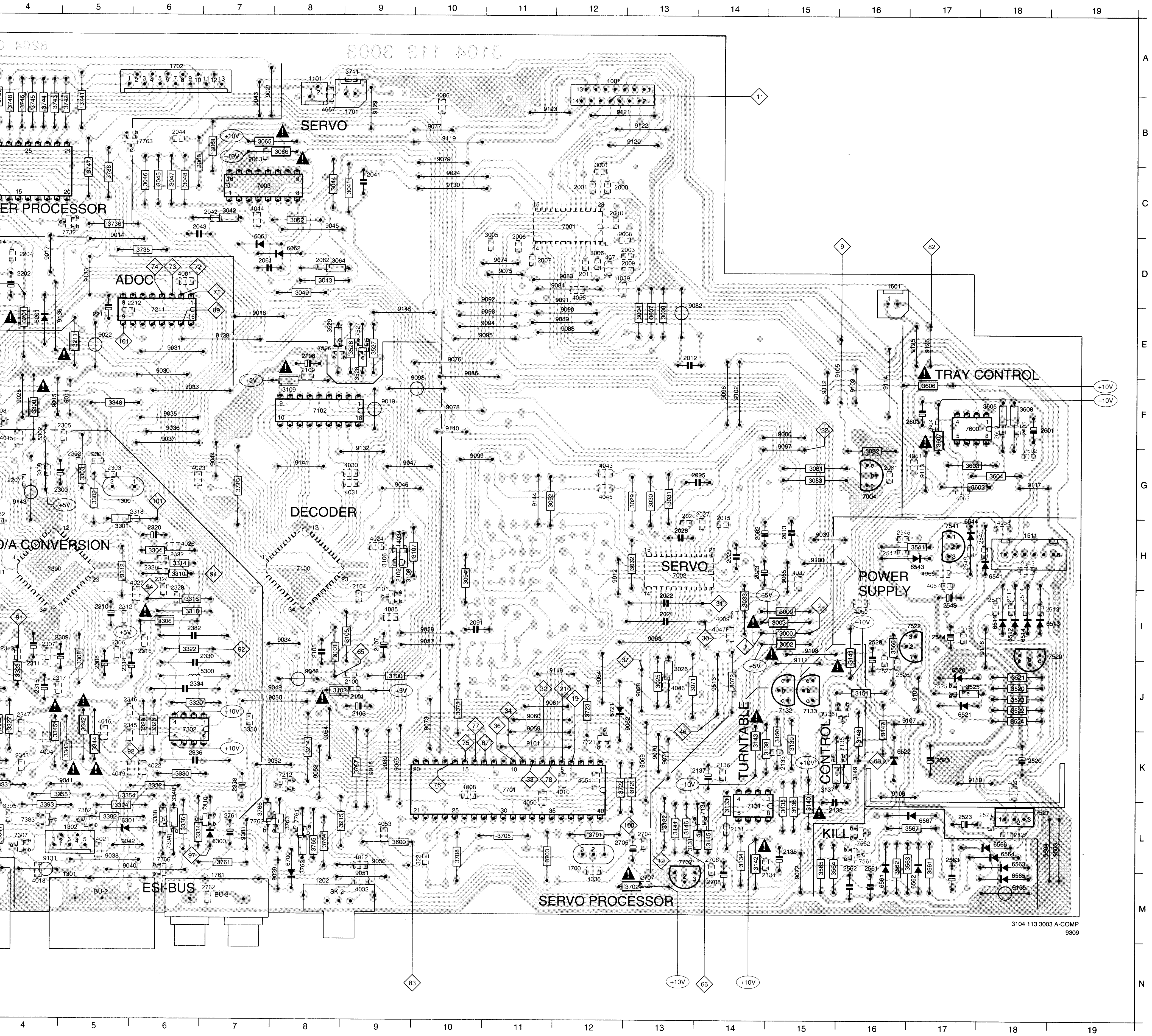

FROM PIN 29-30 OF IC7701 ON DECODER CIRCUIT
RSIN
RSOUT
TO R3525
FROM T7562
ON SUPPLY CIRCUIT
STB1
KILL
DISRES
SDIS
CLK
ACK
DATA-OUT
DATA-IN
STB2
VFTD
ACF1
ACF2
GND
IR
CONN 1702 TO CONN 1403 ON DISPLAY CIRCUIT
7731
MC68HC05D24
USER
I/O PORT C
I PORT D
RAM
ROM
CPU
I/O PORT A
I/O PORT B
XTAL2
XTAL1
IRQ
RESET
TIMING & CLOCK
TCAP
TCMP
VDD
VSS
1731
4 MHz
7751
X24C04
EEPROM
VCC
SDA
SCC
TEST
A2
A1
A0
+5uP
+5VSB
+10V
-10V
GND
7732
BC858
SK-2
RC5
ESI
7761
BC858
7762
BC848
7763
BC848
6700
BAT85
2761
47u/25V
IN
OUT
RESET
FROM DECODER CIRCUIT
XSYS
WSAB
CLAB
DAAB
ACTIVITY
7204
74HCT04(F)
74HCT04(E)
74HCT04(D)
74HCT04(C)
74HCT04(A)
74HCT04(B)
7201
SM5840A
CKSL
XTI
XTO
CKO
SYSTEM CLOCK
LRCI
BCKI
DIN
INPUT DATA
TIMING CONTROLLER
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
FILTER & ATTENUATION
OUTPUT DATA
MDT
MCK
MLE
BCKO
WCKO
DOL
DOR
DG
RST
nc1
nc2
nc3
nc4
7202
74HC164
7203
74HC164
SHIFT REGISTER
CLK
CLR
QE
QF
QG
QH
QD
QC
QB
QA
B
A
11.2896MHz
1300
7300
SAA7350/AGP
SCKI
WSI
SDI1
SDI2
IDF1
IDF2
IDF3
XSEL
TEST4
INPUT INTERFACE
CONTROL
NOISE SHAPER (R)
NOISE SHAPER (L)
DITHER,DC OFFSET & SCATING
DIGITAL SILENCE DETECTION
SYNC
S/C
XSYS1
MUTE L
MUTE R
FBR-
INTR-
FBL-
INTL-
IRR
VSSAT
7302
LM833(A)
7302
LM833(B)
7303
LM833(A)
7303
LM833(B)
7309
BC848
7311
BC858
7308
BC848
7310
BC858
HIGH DURING DIGITAL MUTE
HIGH DURING DIGITAL MUTE
6300
1N4148
KILL
5us/DIV
11.34us
ANALOGUE SIGNAL
2ms/DIV
2V
1Vpp
AUDIO SIGNALS DISC TRACK 15
11,2896MHz
+4V
-10V
POWER ON
POWER OFF
3104 118 00600R-D
9306
3104 118 00600S-D
9306


1702 - 4
1702 - 3
1702 - 2
1702 - 1
1702 - 11
1702 - 12
1702 - 13
1702 - 15
1702 - 10
1702 - 9
+5uP
3745 22k
DATA-OUT
DATA-IN
3746 22k
STB2
VFTD
ACF1
ACF2
GND
IR
3747 22k
CONN 1702 TO CONN 1403 ON DISPLAY CIRCUIT
7732 BC858
3748 22k
3742 22k
3743 22k
3744 22k
7731 MC68HC05D24
I/O PORT C
USER
I PORT D
3735 22k
3734 22k
3736 22k
RAM
ROM
CPU
I/O PORT A
RC5
SK-2
ESI
3751 10k
3752 10k
VSS
I/O PORT B
XTAL2
XTAL1
IRQ
RESET TIMING
TCAP
TCMP
CLOCK
VDD
3731 220k
1731 4 MHz
2733 22n
IN
OUT
3767 47k
3768 47k
7763 BC848
3764 100R
3766 47k
3765 47k
7761 BC858
6700 BAT85
7762 BC848
3763 47k
3762 18k
2761 47u/25V
3761 10R
1761 - 2
1761 - 4
1761 - 1
1761 - 3
BU-3
ESI
2762 22n
71
72
5us/DIV
WSAB
CLAB
11.34us
91
92
ANALOGUE SIGNAL
93
94
2V
1Vpp
2ms/DIV
AUDIO SIGNALS DISC TRACK 15
101
11,2896MHz
+4V
-10V
97
POWER ON
POWER OFF
+5VSB
6R8
3202
2201 22n
7201 SM5840A
VDD
MDT
MCK
MLE
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
FILTER & ATTENUATION
TIMING CONTROLLER
OUTPUT DATA
BCKO
WCKO
DOR
DOL
DG
RST
nc1
nc2
nc3
nc4
2206 330p
3300 6R8
11.2896MHz
1300
2303 47p
2304 47p
3302 1k
3301 220k
2301 100n
2300 33u/16V
5302 4u7
3309 100R
2302 56p
2207 22p
3303 100R
2305 47p
2308 47u/25V
2306 100n
2310 47u/50V
2312 100n
3304 6R8
3306 100R
2318 100n
2320 33u/16V
2314 33u/16V
2316 100n
7300 SAA7350/AGP
XIN
XOUT
XSYS1
XSYS2
:2
SYNC
S/C
CONTROL
NOISE SHAPER (R)
NOISE SHAPER (L)
DITHER,DC OFFSET & SCATING
INPUT INTERFACE
DIGITAL SILENCE DETECTION
XSEL
SCKI
WSI
SDI1
SDI2
IDF1
IDF2
IDF3
TEST4
TEST6
TEST5
TEST1
TEST2
TEST3
FBR+
INTR+
FBR-
INTR-
VSSAT
IRR
FBL+
INTL+
FBL-
INTL-
2322 22p
3310 51k
2326 470p
2324 22p
3312 51k
2328 470p
3308 24k
2323 22p
3311 51k
2327 470p
2325 22p
3313 51k
2329 470p
2309 47u/25V
2307 100n
2311 47u/50V
2313 100n
2317 100n
2315 33u/16V
2319 100n
2321 33u/16V
3307 100R
3305 6R8
MUTE L
MUTE R
3349 10k
3351 4k7
7311 BC858
3347 4k7
7309 BC848
HIGH DURING DIGITAL MUTE
3348 10k
3350 4k7
7310 BC858
3346 4k7
7308 BC848
2330 180p
3320 10k
3314 10k
3316 10k
3318 10k
2332 180p
7302 LM833(A)
3344 10R
2346 100n
2331 180p
3321 10k
3315 10k
3317 10k
3319 10k
2333 180p
7303 LM833(A)
3345 10R
2347 100n
5300 220uH
2334 1n
3322 5k6
3326 7k5
3328 5k6
2336 100p
7302 LM833(B)
3330 10k
3342 10R
2342 100n
2338 100u/16V
5301 220uH
2335 1n
3323 5k6
3327 7k5
3329 5k6
2337 100p
7303 LM833(B)
3331 10k
3343 10R
2343 100n
2339 100u/16V
3354 220k
6300 1N4148
KILL
3334 100R
3336 100R
3392 100
3394 2k2
7382 BC818
3332 10k
7304 BC818
7306 BC818
3338 2k2
3340 2k2
3335 100R
3337 100R
3393 100R
3395 2k2
7383 BC818
3333 10k
7305 BC818
7307 BC818
3339 2k2
3341 2k2
3355 220k
6301 1N4148
CONN 1302 TO CONN 1310 ON HEADPHONE CIRCUIT
+10V
-10V
1302 - 5
1302 - 4
RHP
1302 - 3
R
1301 - 1
GND
1302 - 2
1301 - 3
LHP
1302 - 1
L
1301 - 2
BU-2
ANALOG OUTPUT
2204 22n
7203 74HC164
SHIFT REGISTER
CLK
CLR
QE
QF
QG
QH
VDD
GND
QD
QC
QB
QA
B
A
3104 118 00600S-D
9306

1300	H 8
1301	M21
1301	L21
1301	J21
1302	L21
1302	K21
1302	I21
1302	I21
1302	I21
1702	A 3
1702	A 3
1702	A 3
1702	A 3
1702	A 5
1702	A 6
1702	A 7
1702	A 8
1702	A 8
1702	A 9
1702	A 9
1702	A 9
1702	A10
1702	A10
1731	G 7
1761	G21
1761	G21
1761	F21
1761	F21
2201	I 4
2202	M 2
2203	N 1
2204	N 6
2205	I 4
2206	L 4
2207	K 7
2208	M 3
2300	I 7
2301	I 7
2302	J 7
2303	H 8
2304	H 9
2305	I 9
2306	I10
2307	N10
2308	I10
2309	N10
2310	I11
2311	N11
2312	I11
2313	N11
2314	I12
2315	N12
2316	I12
2317	M12
2318	H12
2319	N12
2320	H12
2321	N12
2322	J13
2323	L13
2324	J13
2325	M13
2326	J13
2327	L13
2328	J13
2329	L13
2330	I15
2331	L15
2332	J15
2333	M15
2334	I17
2335	L17
2336	J18
2337	L18
2338	J19
2339	M19
2342	K18
2343	N18
2346	K16
2347	N16
2733	F 9
2751	E 3
2761	F16
2762	G20
3201	L 2
3202	H 4
3300	H 7
3301	I 8
3302	I 9
3303	I 9
3304	G12
3305	O12
3306	H11
3307	N11
3308	K13
3309	I 7
3310	J13
3311	L13
3312	J13
3313	M13
3314	J14
3315	M14
3316	J14
3317	M14
3318	J14
3319	M14
3320	I15
3321	L15
3322	J16
3323	M16
3326	J17
3327	M17
3328	I18
3329	L18
3330	K17
3331	M17
3332	K19
3333	M19
3334	J19
3335	M19
3336	J20
3337	M20
3338	K19
3339	N19
3340	K20
3341	N20
3342	K18
3343	N18
3344	K15
3345	N15
3346	O13
3347	O 9
3348	N13
3349	O 9
3350	N14
3351	O10
3354	K16
3355	O19
3392	I20
3393	L20
3394	J20
3395	L20
3731	F 7
3734	C11
3735	C 9
3736	B11
3741	B 4
3742	B 4
3743	B 4
3744	B 4
3745	A 5
3746	A 6
3747	A10
3748	B 7
3751	E 4
3752	E 4
3761	G16
3762	G15
3763	F15
3764	D15
3765	E14
3767	F13
3768	F12
5300	J16
5301	L16
5302	I 7
6300	K17
6301	O19
6700	F15
7201	I 6
7202	N 1
7203	N 6
7204	M 1
7204	J 1
7204	J 1
7204	I 1
7204	I 1
7204	H 1
7300	I12
7302	J15
7302	J18
7303	L15
7303	M18
7304	K19
7305	M19
7306	K20
7307	N21
7308	O14
7309	O10
7310	N15
7311	O11
7382	J20
7383	L20
7731	B 9
7732	A11
7751	E 2
7761	F15
7762	F14
7763	F12

MAIN PANEL COMPONENT SIDE L5


FTS
4MHz
USER PROCESSOR
SERVO
ADOC
D/A CONVERSION
DECODER
HIGH DURING DIGITAL MUTE
DIGITAL OUT
ESI-BUS
SERVO PROCESSOR
TURNTABLE CONTROL
KILL
POWER SUPPLY
TRAY CONTROL
BU-4
BU-2
BU-3
SK-2
+5V
-10V
+10V
* CD930
** CD940
3104 113 3003 A-COMP
9309



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1101	A8	2347	J4	3213	L2	3761	L7	7308	F4	9093	E10
1201	L3	2382	I6	3214	K8	3762	M8	7309	H2	9094	E10
1202	M8	2511	I18	3215	L9	3763	L8	7310	L7	9095	E10
1300	G5	2512	I18	3216	J2	3764	L8	7311	I2	9096	F14
1301	M5	2513	I18	3219	K2	3765	L8	7382	L5	9098	F9
1302	L5	2514	I18	3221	L10	3766	L7	7383	L4	9099	G10
1511	H18	2520	K18	3300	F4	3767	K9	7520	I19	9100	H15
1601	D16	2521	L18	3301	H5	3786	C5	7521	L18	9101	K11
1700	L12	2522	L18	3302	G5	3999	D1	7522	I16	9102	F14
1701	B9	2523	L17	3303	G5	4001	D6	7525	J17	9103	F16
1702	A6	2525	K17	3304	H6	4002	K2	7526	E8	9105	E16
1731	B2	2526	J16	3305	H3	4004	K4	7527	E9	9106	K16
1761	M7	2527	J16	3306	I6	4005	G2	7541	H17	9107	J16
2000	C12	2528	I16	3307	H3	4006	C3	7561	L16	9108	I15
2001	C12	2542	I17	3308	J5	4007	A3	7562	L16	9109	J17
2003	D12	2542	H18	3309	G4	4008	K10	7600	F17	9110	K17
2006	D11	2543	H18	3310	H6	4009	I14	7701	K11	9111	J15
2007	D11	2544	I17	3311	H4	4010	K12	7702	L13	9112	F15
2008	C12	2546	H16	3312	H5	4011	K18	7721	K12	9113	G17
2009	D12	2547	H16	3313	I3	4012	L9	7731	C3	9114	F16
2010	C12	2548	I17	3314	H6	4013	J3	7732	D5	9116	I18
2011	D12	2549	H17	3315	I2	4014	J3	7751	B3	9117	G18
2012	E13	2561	L16	3316	I6	4015	F4	7761	L8	9118	J11
2013	H15	2562	L16	3317	I3	4016	J5	7762	L7	9119	B10
2015	H14	2563	L17	3318	I6	4018	M4	7763	B6	9120	B13
2021	I13	2600	F18	3319	I3	4019	K5	9001	J2	9121	B12
2022	I13	2601	F18	3320	J6	4021	L5	9002	G3	9122	B13
2023	H14	2602	G18	3321	J3	4022	K6	9003	F2	9123	B11
2025	G13	2603	F16	3322	I6	4023	G6	9004	F2	9124	E2
2026	G13	2604	F17	3323	J4	4024	H9	9005	F2	9125	E17
2027	G14	2605	F18	3326	K6	4026	H6	9006	F3	9126	E17
2028	H13	2704	L13	3327	K4	4027	H5	9007	K2	9128	E7
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2041	C9	2706	L14	3329	K4	4031	G9	9009	F3	9130	C10
2042	C7	2707	M13	3330	K6	4032	M9	9010	F3	9131	L4
2043	C6	2708	M14	3331	K3	4034	H9	9011	F5	9132	G9
2044	B6	2733	C2	3332	K6	4036	M12	9012	H12	9133	D5
2061	D7	2751	A3	3333	K4	4037	H15	9013	E2	9135	C2
2062	D8	2761	L7	3334	L7	4039	D12	9014	D5	9135	C2
2063	B7	2762	M7	3335	L3	4043	G12	9015	F4	9136	E5
2081	G16	3000	I15	3336	L6	4044	C7	9016	K9	9140	F10
2082	H14	3001	C12	3337	L3	4045	G12	9017	D4	9141	G8
2091	I10	3002	I15	3338	L6	4046	J13	9018	E7	9142	G2
2100	J9	3003	I15	3339	L4	4047	I14	9019	F9	9143	G4
2101	J9	3004	E13	3340	L6	4050	L11	9020	F4	9144	G11
2102	H9	3005	D10	3341	L4	4051	K12	9021	B7	9145	E9
2103	J9	3006	D12	3342	K5	4053	L9	9022	E5	9155	M18
2104	I9	3007	E13	3343	K5	4056	D12	9023	E2	9503	L19
2105	J8	3008	E13	3344	K5	4057	B8	9024	C10	9504	L19
2107	I9	3009	I15	3345	K4	4058	H18	9025	F4	9513	J14
2108	E8	3025	J13	3346	G4	4060	I16	9026	E2		
2109	E8	3026	J13	3347	H3	4061	G17	9027	E4		
2131	L14	3029	G13	3348	F5	4062	G17	9028	I2		
2132	L15	3030	G13	3349	H2	4066	H17	9029	M8		
2133	K15	3031	G13	3350	K7	4067	H17	9030	E6		
2134	M14	3032	H13	3351	H2	4071	D12	9031	E6		
2135	L15	3033	I14	3352	H4	4081	D2	9033	F6		
2136	K14	3041	C9	3354	K5	4085	I9	9034	I8		
2137	K13	3042	C7	3355	K4	4086	B10	9035	F6		
2201	G2	3043	D8	3392	L5	5211	L3	9036	F6		
2202	D4	3044	C8	3393	L4	5300	J7	9037	F6		
2203	D2	3045	C6	3394	L5	5301	J3	9038	L5		
2204	D4	3046	C6	3395	L4	5302	F4	9039	H15		
2205	F2	3047	C6	3520	J18	6061	D7	9040	L5		
2206	F3	3048	C6	3521	J18	6062	D8	9041	K5		
2207	G4	3049	D8	3522	J18	6201	E4	9042	L5		
2208	D2	3061	B7	3523	J18	6300	L7	9043	B7		
2210	L2	3062	C8	3524	J18	6301	L5	9044	G7		
2211	E5	3063	C6	3525	J17	6511	I18	9045	C8		
2212	E5	3064	D8	3526	E9	6512	I18	9046	G9		
2214	M3	3065	B7	3527	E9	6513	I18	9047	G9		
2215	J2	3066	B8	3528	F9	6514	I18	9048	J8		
2216	J2	3071	J14	3529	E8	6520	J17	9049	J7		
2300	G4	3072	J14	3541	H17	6521	J17	9050	J7		
2302	G5	3075	J10	3561	M17	6522	K16	9051	M9		
2303	G5	3081	G15	3562	M16	6541	H18	9052	K7		
2304	G5	3082	G16	3563	L17	6543	H17	9053	K8		
2305	F4	3083	G15	3564	M16	6544	H17	9054	K8		
2306	I5	3092	G11	3565	M15	6561	M16	9055	K9		
2307	I4	3094	H10	3566	I16	6562	M17	9056	L9		
2308	J5	3100	J9	3567	L16	6563	L18	9057	I10		
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2310	I5	3102	J8	3602	G17	6565	M18	9059	K11		
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2312	I5	3106	H9	3604	G18	6567	L17	9061	J11		
2313	I4	3107	H10	3605	F18	6700	L8	9062	K13		
2314	J5	3108	H9	3606	F17	6721	J12	9063	I13		
2315	J4	3109	F8	3607	F17	7001	C12	9064	J12		
2316	I6	3131	L13	3608	F18	7002	H13	9065	H15		
2317	J4	3132	L13	3701	L12	7003	C7	9066	F15		
2318	G5	3133	L14	3702	M13	7004	G16	9067	G15		
2319	H3	3134	L14	3703	L11	7100	H8	9068	J13		
2320	H6	3135	L15	3705	L11	7101	I9	9069	K13		
2321	H3	3136	L15	3708	L10	7102	F8	9070	K13		
2322	H6	3137	K15	3710	G7	7131	L14	9071	K13		
2323	H3	3138	K15	3711	A9	7132	J15	9072	M15		
2324	H6	3139	K15	3721	K13	7133	J15	9073	K10		
2325	I3	3140	L15	3722	K12	7134	L14	9074	D11		
2326	H6	3141	J16	3723	J12	7135	K16	9075	D11		
2327	I3	3142	L14	3731	B2	7136	J15	9076	E10		
2328	I6	3143	K14	3733	B4	7201	G2	9077	B10		
2329	I3	3144	L13	3734	B3	7202	D2	9078	F10		
2330	J6	3145	L14	3735	D6	7203	D3	9079	B10		
2331	I3	3146	L13	3736	C5	7204	E3	9080	K9		
2333	I3	3147	K16	3741	B5	7211	E6	9081	L7		
2334	J6	3148	K16	3742	B5	7212	K8	9082	E13		
2335	J3	3149	K16	3743	B4	7213	K2	9083	D12		
2336	K6	3150	K15	3744	B4	7300	H4	9084	D11		
2337	K3	3151	J16	3745	B4	7302	K6	9086	E10		
2338	K7	3201	E4	3746	B4	7303	K3	9088	E12		
2339	K3	3202	E2	3747	C5	7304	L6	9089	E12		
2343	K4	3210	L3	3748	B4	7305	L3	9090	E12		
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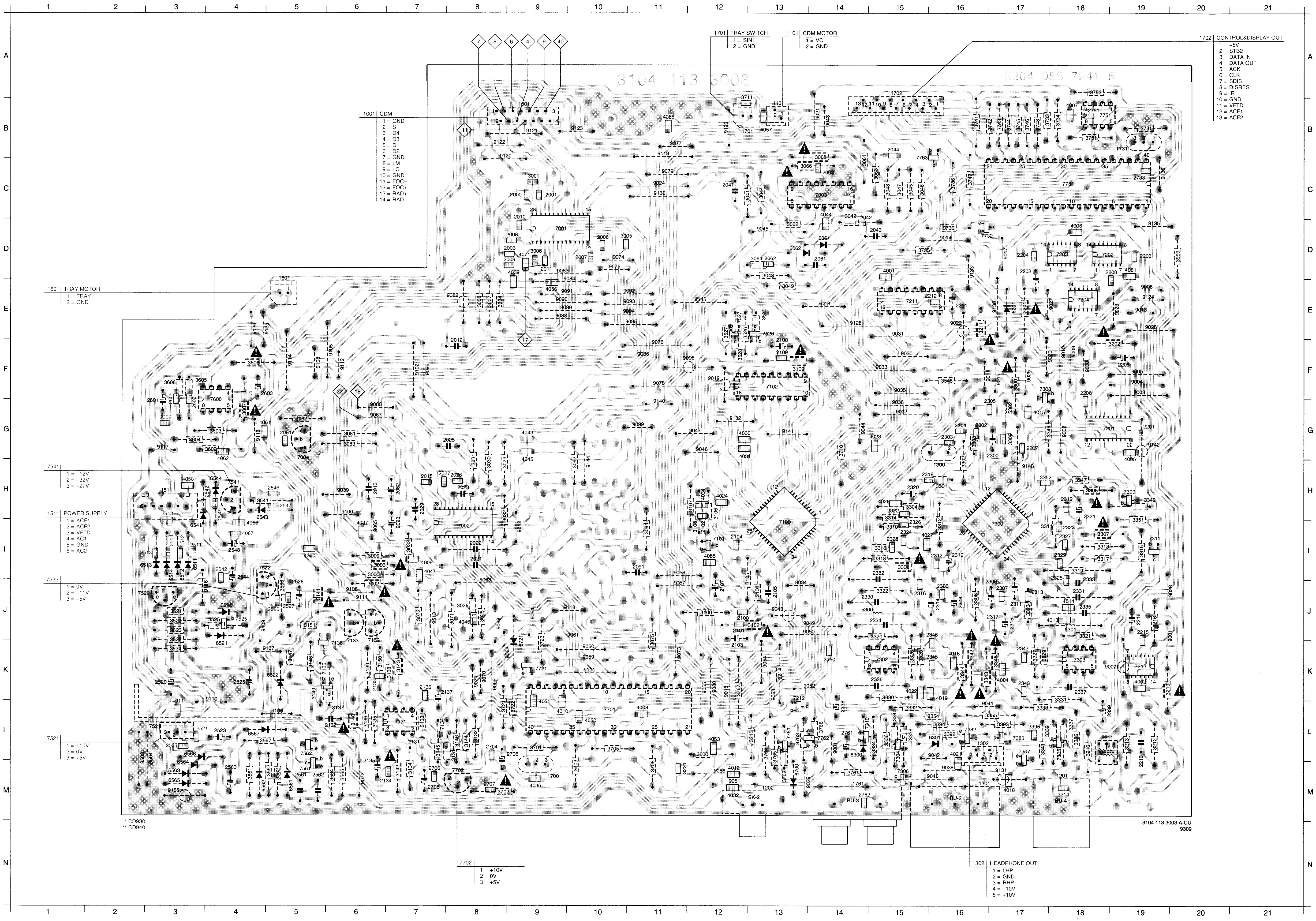
31-2

MAIN PANEL SOLDER SIDE L5



3104 113 3003
8204 055 7241.5
7001
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7701
7731
SK-2
BU-2
BU-3
BU-4

1001 CDM
1 = GND
2 = S
3 = D4
4 = D3
5 = D1
6 = D2
7 = GND
8 = LM
9 = LO
10 = GND
11 = FOC–
12 = FOC+
13 = RAD+
14 = RAD–

1701 TRAY SWITCH
1 = SIN1
2 = GND

1101 CDM MOTOR
1 = VC
2 = GND

1702 CONTROL&DISPLAY OUT
1 = +5V
2 = STB2
3 = DATA IN
4 = DATA OUT
5 = ACK
6 = CLK
7 = SDIS
8 = DISRES
9 = IR
10 = GND
11 = VFTD
12 = ACF1
13 = ACF2

1601 TRAY MOTOR
1 = TRAY
2 = GND

7541
1 = –12V
2 = –32V
3 = –27V

1511 POWER SUPPLY
1 = ACF1
2 = ACF2
3 = VFTD
4 = AC1
5 = GND
6 = AC2

7522
1 = 0V
2 = –11V
3 = –5V

7521
1 = +10V
2 = 0V
3 = +5V

* CD930
** CD940

3104 113 3003 A-CU
9309

7702
1 = +10V
2 = 0V
3 = +5V

1302 HEADPHONE OUT
1 = LHP
2 = GND
3 = RHP
4 = –10V
5 = +10V

1001
1101
1201
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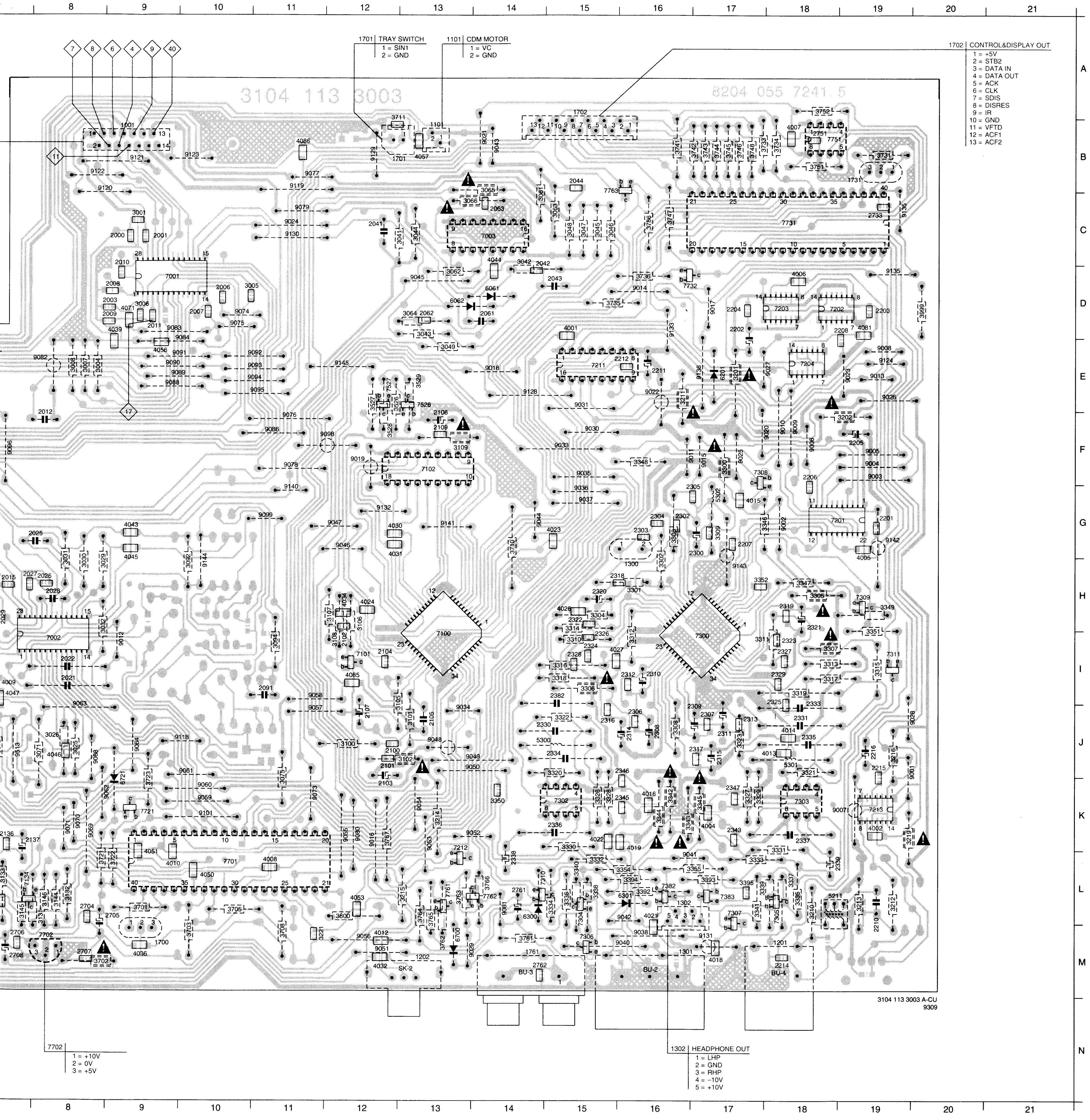

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1101	B13	2514	I3	3304	H15	4008	L11	7732	D16	9121	B9
1201	M18	2520	K3	3305	H18	4009	I7	7751	B18	9122	B8
1202	M13	2521	L3	3306	I15	4010	L9	7761	L13	9123	B10
1300	H16	2522	L3	3307	I18	4011	L3	7762	L14	9124	E19
1301	M16	2523	L4	3308	J16	4012	M12	7763	C15	9125	E5
1302	L16	2525	K4	3309	G17	4013	J17	9001	K20	9126	E4
1511	H3	2526	J5	3310	I15	4014	J18	9002	G18	9128	E14
1601	E5	2527	J5	3311	I17	4015	G17	9003	F19	9129	B12
1700	M9	2528	J5	3312	I16	4016	K16	9004	F19	9130	C11
1701	B12	2542	H4	3313	I18	4018	M17	9005	F19	9131	M17
1702	A15	2542	I4	3314	H15	4019	K16	9006	F18	9132	G12
1731	B19	2543	H3	3315	I19	4021	L16	9007	K18	9133	D16
1761	M14	2544	I4	3316	I15	4022	K15	9008	E19	9135	D19
2000	C9	2546	H5	3317	I18	4023	G15	9009	F18	9135	C19
2001	C9	2547	H5	3318	I15	4024	H12	9010	F18	9136	E17
2003	D8	2548	I4	3319	I18	4026	H15	9011	F17	9140	G11
2006	D10	2549	I4	3320	J15	4027	I15	9012	I9	9141	G13
2007	D10	2561	M5	3321	J18	4030	G12	9013	E19	9142	G19
2008	D9	2562	M5	3322	J15	4031	G12	9014	D16	9143	H17
2009	D8	2563	M4	3323	J17	4032	M12	9015	F17	9144	H10
2010	C9	2600	G3	3326	K15	4034	H12	9016	K12	9145	E12
2011	D9	2601	G3	3327	K17	4036	M9	9017	D17	9155	M3
2012	F8	2602	G3	3328	K15	4037	I6	9018	E14	9503	M2
2013	H6	2603	F4	3329	K17	4039	D9	9019	F12	9504	M3
2015	H7	2604	G4	3330	K15	4043	G9	9020	F18	9513	J7
2021	I8	2605	G3	3331	L18	4044	C14	9021	B14		
2022	I8	2704	L8	3332	L15	4045	H9	9022	E16		
2023	I7	2705	L9	3333	L17	4046	J8	9023	E19		
2025	G7	2706	M7	3334	L15	4047	I7	9024	C11		
2026	H8	2707	M8	3335	L18	4050	L10	9025	F17		
2027	H7	2708	M7	3336	L15	4051	L9	9026	E19		
2028	H8	2733	C19	3337	L18	4053	L12	9027	E18		
2029	H7	2751	B18	3338	L15	4056	E9	9028	J20		
2041	C12	2761	L14	3339	L18	4057	B13	9029	M14		
2042	D14	2762	M14	3340	L15	4058	H3	9030	F15		
2043	D15	3000	I6	3341	L17	4060	I5	9031	E15		
2044	B15	3001	C9	3342	K16	4061	G4	9033	F15		
2061	D14	3002	J6	3343	K16	4062	H4	9034	J13		
2062	D13	3003	I6	3344	K16	4066	I4	9035	F15		
2063	C14	3004	E8	3345	K17	4067	I4	9036	G15		
2081	G5	3005	D10	3346	G18	4071	D9	9037	G15		
2082	H7	3006	D9	3347	H18	4081	D19	9038	M16		
2091	I11	3007	E8	3348	F16	4085	I12	9039	H6		
2100	J12	3008	E8	3349	H19	4086	B11	9040	M15		
2101	J12	3009	I6	3350	K14	5211	L18	9041	L16		
2102	I12	3025	J8	3351	I19	5300	J14	9042	L16		
2103	K12	3026	J8	3352	H17	5301	J18	9043	B14		
2104	I12	3029	H9	3354	L15	5302	G17	9044	G14		
2105	J13	3030	H8	3355	L16	6061	D14	9045	D13		
2107	J12	3031	H8	3392	L16	6062	D13	9046	G12		
2108	F13	3032	I9	3393	L17	6201	E17	9047	G12		
2109	F13	3033	I7	3394	L16	6300	L14	9048	J13		
2131	L7	3041	C13	3395	L17	6301	L16	9049	J13		
2132	L5	3042	C14	3520	J3	6511	I3	9050	J13		
2133	K6	3043	D13	3521	J3	6512	J3	9051	M12		
2134	M6	3044	C13	3522	K3	6513	I2	9052	K13		
2135	M6	3045	C15	3523	J3	6514	J3	9053	L13		
2136	K7	3046	C15	3524	K3	6520	J4	9054	K13		
2137	K7	3047	C15	3525	J4	6521	K4	9055	K12		
2201	G19	3048	C15	3526	E12	6522	K5	9056	M12		
2202	D17	3049	E13	3527	E12	6541	I3	9057	J11		
2203	D19	3061	C14	3528	F12	6543	I4	9058	I11		
2204	D17	3062	D13	3529	E13	6544	H4	9059	K10		
2205	F19	3063	C15	3541	H4	6561	M5	9060	K10		
2206	F18	3064	D13	3561	M4	6562	M5	9061	J10		
2207	G17	3065	C14	3562	M5	6563	M3	9062	K9		
2208	D18	3066	C13	3563	M5	6564	M3	9063	J8		
2210	M19	3071	J8	3564	M6	6565	M3	9064	J9		
2211	E16	3072	J7	3565	M6	6566	L3	9065	I6		
2212	E15	3075	K11	3566	J5	6567	L4	9066	G6		
2214	M18	3081	G6	3567	L4	6700	M13	9067	G6		
2215	J19	3082	G5	3600	L12	6721	K9	9068	J8		
2216	J19	3083	G6	3602	G3	7001	D9	9069	K8		
2300	G16	3092	H10	3603	G4	7002	I8	9070	K8		
2302	G16	3094	I11	3604	G3	7003	C14	9071	K8		
2303	G16	3100	J12	3605	F3	7004	H5	9072	M6		
2304	G16	3101	J13	3606	F4	7100	I13	9073	K11		
2305	G16	3102	J13	3607	G4	7101	I12	9074	D10		
2306	J16	3105	J13	3608	F3	7102	F13	9075	D10		
2307	J17	3106	I12	3701	L9	7131	L7	9076	F11		
2308	J16	3107	H12	3702	M8	7132	K6	9077	B11		
2309	J16	3108	I12	3703	M10	7133	K6	9078	F11		
2310	I16	3109	F13	3705	L10	7134	L7	9079	C11		
2311	J17	3131	M8	3708	M11	7135	K6	9080	K12		
2312	I16	3132	L8	3710	G14	7136	K6	9081	L14		
2313	J17	3133	L7	3711	B12	7201	G18	9082	E8		
2314	J16	3134	M7	3721	L8	7202	D18	9083	D9		
2315	J17	3135	L6	3722	L9	7203	D18	9084	E9		
2316	J15	3136	L6	3723	K9	7204	E18	9086	F11		
2317	J16	3137	L6	3731	B19	7211	E15	9088	E9		
2318	H15	3138	K7	3733	B18	7212	K13	9089	E9		
2319	H18	3139	K6	3734	B18	7213	K19	9090	E9		
2320	H15	3140	L6	3735	D15	7300	I17	9091	E9		
2321	H18	3141	J5	3736	D16	7302	K15	9092	E10		
2322	H15	3142	M7	3741	B16	7303	K18	9093	E10		
2323	I18	3143	K7	3742	B17	7304	M15	9094	E10		
2324	I15	3144	L8	3743	B17	7305	L18	9095	E10		
2325	I18	3145	L7	3744	B17	7306	M15	9096	F7		
2326	I15	3146	L8	3745	B17	7307	L17	9098	F11		
2327	I18	3147	K5	3746	B17	7308	F17	9099	G11		
2328	I15	3148	K5	3747	C16	7309	H19	9100	H6		
2329	I18	3149	K5	3748	B17	7310	L15	9101	K10		
2330	J14	3150	K6	3751	B18	7311	I19	9102	F7		
2331	J18	3151	J5	3752	A18	7382	L16	9103	F5		
2333	J18	3201	E17	3761	M14	7383	L17	9105	F6		
2334	J15	3202	F18	3762	M13	7520	J2	9106	L5		
2335	J18	3210	L18	3763	L13	7521	L3	9107	K4		
2336	K15	3211	E16	3764	L13	7522	I4	9108	J6		
2337	K18	3212	L19	3765	M13	7525	J4	9109	J4		
2338	L14	3213	L19	3766	L14	7526	E13	9110	L4		
2339	L19	3214	K13	3767	K12	7527	E12	9111	J6		
2343	K17	3215	L13	3786	C16	7541	H4	9112	F6		
2345	K15	3216	J19	3999	D20	7561	M5	9113	G4		
2346	J15	3219	K20	4001	D15	7562	L5	9114	F5		
2347	K17	3221	M12	4002	K19	7600	G4	9116	J4		
2382	I15	3300	F17	4004	K17	7701	L10	9117	G3		
2511	I3	3301	H16	4005	H19	7702	M8	9118	J9		
2512	I3	3302	H16	4006	D18	7721	K9	9119	B11		

3106	4822 050 23902	3k9	1%	0,6W
3107	4822 050 29102	9k1	1%	0,6W
3108	4822 050 21602	1k6	1%	0,6W
3109	4822 111 30846	6Ω8	5%	0,25W
3131	4822 050 24702	4k7	1%	0,6W
3132	4822 050 24703	47k	1%	0,6W
3133	4822 116 52234	100k	5%	0,5W
3134	4822 050 29103	91k	1%	0,6W
3135	4822 050 23302	3k3	1%	0,6W
3136	4822 050 15602	5k6	1%	0,4W
3137	4822 050 21504	150k	1%	0,6W
3138	4822 050 28203	82k	1%	0,6W
3139	4822 051 10101	100Ω	2%	0,25W
3140	4822 052 10478	4Ω7	5%	0,33W
3141	4822 052 10478	4Ω7	5%	0,33W
3142	4822 052 10478	4Ω7	5%	0,33W
3143	4822 052 10478	4Ω7	5%	0,33W
3144	4822 050 26804	680k	1%	0,6W
3145	4822 050 15602	5k6	1%	0,4W
3146	4822 050 13303	33k	1%	0,4W
3147	4822 050 24702	4k7	1%	0,6W
3148	4822 050 24702	4k7	1%	0,6W
3149	4822 051 10122	1k2	2%	0,25W
3150	4822 050 21604	160k	1%	0,6W
3151	4822 050 24702	4k7	1%	0,6W
3201	4822 111 30846	6Ω8	5%	0,25W
3202	4822 111 30846	6Ω8	5%	0,25W
3210	5322 116 51882	0Ω		
3211	4822 111 30846	6Ω8	5%	0,25W
3212	4822 051 10561	560Ω	2%	0,25W
3213	4822 050 26201	620Ω	1%	0,6W
3214	4822 050 22203	22k	1%	0,6W
3215	4822 050 22203	22k	1%	0,6W
3216	4822 050 22203	22k	1%	0,6W
3219	4822 111 30846	6Ω8	5%	0,25W
3221	4822 050 22203	22k	5%	1/8W
3300	4822 111 30846	6Ω8	5%	0,25W
3301	4822 050 22204	220k	1%	0,6W
3302	4822 050 21002	1k	1%	0,6W
3303	4822 051 10101	100Ω	2%	0,25W
3304	4822 111 30846	6Ω8	5%	0,25W
3305	4822 111 30846	6Ω8	5%	0,25W
3306	4822 052 10101	100Ω	5%	0,33W
3307	4822 052 10101	100Ω	5%	0,33W
3308	4822 050 22403	24k	1%	0,6W
3309	4822 051 20101	100Ω	5%	0,1W
3310	4822 050 25103	51k	1%	0,6W
3311	4822 050 25103	51k	1%	0,6W
3312	4822 050 25103	51k	1%	0,6W
3313	4822 050 25103	51k	1%	0,6W
3314	4822 050 21003	10k	1%	0,6W
3315	4822 050 21003	10k	1%	0,6W
3316	4822 050 21003	10k	1%	0,6W

3317	4822 050 21003	10k	1%	0,6W
3318	4822 050 21003	10k	1%	0,6W
3319	4822 050 21003	10k	1%	0,6W
3320	4822 050 21003	10k	1%	0,6W
3321	4822 050 21003	10k	1%	0,6W
3322	4822 050 25602	5k6	1%	0,6W
3323	4822 050 25602	5k6	1%	0,6W
3326	4822 050 27502	7k5	1%	0,6W
3327	4822 050 27502	7k5	1%	0,6W
3328	4822 050 25602	5k6	1%	0,6W
3329	4822 050 25602	5k6	1%	0,6W
3330	4822 050 21003	10k	1%	0,6W
3331	4822 050 21003	10k	1%	0,6W
3332	4822 050 21003	10k	1%	0,6W
3333	4822 050 21003	10k	1%	0,6W
3334	4822 051 10101	100Ω	2%	0,25W
3335	4822 051 10101	100Ω	2%	0,25W
3336	4822 051 10101	100Ω	2%	0,25W
3337	4822 051 10101	100Ω	2%	0,25W
3338	4822 050 22202	2k2	1%	0,6W
3339	4822 050 22202	2k2	1%	0,6W
3340	4822 050 22202	2k2	1%	0,6W
3341	4822 050 22202	2k2	1%	0,6W
3342	4822 052 10109	10Ω	5%	0,33W
3343	4822 052 10109	10Ω	5%	0,33W
3344	4822 052 10109	10Ω	5%	0,33W
3345	4822 052 10109	10Ω	5%	0,33W
3346	4822 050 24702	4k7	1%	0,6W
3347	4822 050 24702	4k7	1%	0,6W
3348	4822 050 21003	10k	1%	0,6W
3349	4822 050 21003	10k	1%	0,6W
3350	4822 051 20472	4k7	5%	0,1W
3351	4822 050 24702	4k7	1%	0,6W
3354	4822 050 22204	220k	1%	0,6W
3355	4822 050 22204	220k	1%	0,6W
3392	4822 051 10101	100Ω	2%	0,25W
3393	4822 051 10101	100Ω	2%	0,25W
3394	4822 050 22202	2k2	1%	0,6W
3395	4822 051 20222	2k2	5%	0,1W
3520	4822 050 26801	680Ω	1%	0,6W
3521	4822 050 26801	680Ω	1%	0,6W
3522	4822 050 26801	680Ω	1%	0,6W
3523	4822 050 26801	680Ω	1%	0,6W
3524	4822 050 26801	680Ω	1%	0,6W
3525	4822 050 23302	3k3	1%	0,6W
3526	4822 051 10101	100Ω	2%	0,25W
3527	4822 050 24703	47k	1%	0,6W
3528	4822 050 22203	22k	1%	0,6W
3529	4822 050 21003	10k	1%	0,6W
3541	4822 050 24702	4k7	1%	0,6W
3561	4822 116 52224	470Ω	5%	0,5W
3562	4822 050 24703	47k	1%	0,6W
3563	4822 050 22205	2M2	1%	0,6W

3564	4822 050 21003	10k	1%	0,6W
3565	4822 050 13303	33k	1%	0,4W
3566	4822 050 22204	220k	1%	0,6W
3567	4822 050 21002	1k	1%	0,6W
3600	4822 050 25102	5k1	1%	0,6W
3602	4822 050 21003	10k	1%	0,6W
3603	4822 050 21003	10k	1%	0,6W
3604	4822 050 21003	10k	1%	0,6W
3605	4822 050 21003	10k	1%	0,6W
3606	4822 052 10108	1Ω	5%	0,33W
3607	4822 052 10108	1Ω	5%	0,33W
3608	4822 052 10229	22Ω	5%	0,33W
3701	4822 050 22204	220k	1%	0,6W
3702	4822 052 10478	4Ω7	5%	0,33W
3703	4822 050 22203	22k	1%	0,6W
3705	4822 050 22203	22k	1%	0,6W
3708	4822 050 22203	22k	1%	0,6W
3710	4822 050 22203	22k	1%	0,6W
3711	4822 051 20223	22k	5%	0,1W
3721	4822 050 22201	220Ω	1%	0,6W
3722	4822 050 21002	1k	1%	0,6W
3723	4822 050 22203	22k	1%	0,6W
3731	4822 050 22204	220k	1%	0,6W
3734	4822 050 22203	22k	1%	0,6W
3735	4822 050 22203	22k	1%	0,6W
3736	4822 050 22203	22k	1%	0,6W
3741	4822 050 22203	22k	1%	0,6W
3742	4822 050 22203	22k	1%	0,6W
3743	4822 050 22203	22k	1%	0,6W
3744	4822 050 22203	22k	1%	0,6W
3745	4822 050 22203	22k	1%	0,6W
3746	4822 050 22203	22k	1%	0,6W
3747	4822 050 22203	22k	1%	0,6W
3748	4822 050 22203	22k	1%	0,6W
3751	4822 050 21003	10k	1%	0,6W
3752	4822 050 21003	10k	1%	0,6W
3761	4822 052 10109	10k	5%	0,33W
3762	4822 050 21803	18k	1%	0,6W
3763	4822 050 24703	47k	1%	0,6W
3764	4822 051 10101	100Ω	2%	0,25W
3765	4822 050 24703	47k	1%	0,6W
3766	4822 050 24703	47k	1%	0,6W
3767	4822 050 24703	47k	1%	0,6W
3768	4822 050 24703	47k	1%	0,6W
4001	4822 051 10008	0Ω	5%	0,25W
4002	4822 051 10008	0Ω	5%	0,25W
4004	4822 051 10008	0Ω	5%	0,25W
4005	4822 051 10008	0Ω	5%	0,25W
4006	4822 051 10008	0Ω	5%	0,25W
4007	4822 051 10008	0Ω	5%	0,25W
4008	4822 051 10008	0Ω	5%	0,25W
4009	4822 051 10008	0Ω	5%	0,25W
4010	4822 051 10008	0Ω	5%	0,25W
4011	4822 051 10008	0Ω	5%	0,25W
4012	4822 051 10008	0Ω	5%	0,25W
4013	4822 051 10008	0Ω	5%	0,25W
4014	4822 051 10008	0Ω	5%	0,25W
4015	4822 051 10008	0Ω	5%	0,25W
4016	4822 051 10008	0Ω	5%	0,25W
4018	4822 051 10008	0Ω	5%	0,25W
4019	4822 051 10008	0Ω	5%	0,25W
4021	4822 051 10008	0Ω	5%	0,25W
4022	4822 051 10008	0Ω	5%	0,25W
4023	4822 051 10008	0Ω	5%	0,25W
4024	4822 051 10008	0Ω	5%	0,25W
4026	4822 051 10008	0Ω	5%	0,25W
4027	4822 051 10008	0Ω	5%	0,25W
4030	4822 051 10008	0Ω	5%	0,25W
4031	4822 051 10008	0Ω	5%	0,25W
4032	4822 051 10008	0Ω	5%	0,25W
4034	4822 051 10008	0Ω	5%	0,25W
4036	4822 051 10008	0Ω	5%	0,25W
4037	4822 051 10008	0Ω	5%	0,25W
4039	4822 051 10008	0Ω	5%	0,25W
4043	4822 051 10008	0Ω	5%	0,25W
4044	4822 051 10008	0Ω	5%	0,25W
4045	4822 051 10008	0Ω	5%	0,25W
4046	4822 051 10008	0Ω	5%	0,25W
4047	4822 051 10008	0Ω	5%	0,25W
4050	4822 051 10008	0Ω	5%	0,25W
4051	4822 051 10008	0Ω	5%	0,25W
4053	4822 051 10008	0Ω	5%	0,25W
4056	4822 051 10008	0Ω	5%	0,25W
4057	4822 051 10008	0Ω	5%	0,25W
4058	4822 051 10008	0Ω	5%	0,25W
4060	4822 051 10008	0Ω	5%	0,25W
4061	4822 051 10008	0Ω	5%	0,25W
4062	4822 051 10008	0Ω	5%	0,25W
4066	4822 051 10008	0Ω	5%	0,25W
4067	4822 051 10008	0Ω	5%	0,25W
4071	4822 051 10008	0Ω	5%	0,25W
4081	4822 051 10008	0Ω	5%	0,25W
4085	4822 051 10008	0Ω	5%	0,25W
4086	4822 051 10008	0Ω	5%	0,25W

COILS

5211	4822 148 80281	DIG.OUT TRANSFORMER
5300	4822 157 51192	220µH
5301	4822 157 51192	220µH
5302	4822 157 51235	4,7µH

DIODES

6061	4822 130 30861	BZX79-C7V5
6062	4822 130 30861	BZX79-C7V5
6201	4822 130 30621	1N4148
6300	4822 130 30621	1N4148
6301	4822 130 30621	1N4148
6511	5322 130 30684	1N4002
6512	5322 130 30684	1N4002
6513	5322 130 30684	1N4002
6514	5322 130 30684	1N4002
6520	4822 130 30621	1N4148
6521	4822 130 30621	1N4148
6522	4822 130 30621	1N4148
6541	5322 130 30684	1N4002
6543	4822 130 31981	BZX79-C3V9
6544	4822 130 34278	BZX79-F6V8
6561	4822 130 34278	BZX79-F6V8
6562	4822 130 30621	1N4148
6563	4822 130 30621	1N4148
6564	4822 130 30621	1N4148
6565	5322 130 30684	1N4002
6566	5322 130 30684	1N4002
6567	4822 130 31981	BZX79-C3V9
6700	4822 130 31983	BAT85
6721	4822 130 80235	BZX79-C3V3

TRANSISTORS & IC's

7001	4822 209 73234	TDA8808T/C3
7002	4822 209 73235	TDA8809T/C2
7003	4822 209 72587	TCA0372DP2-
7004	5322 130 44349	BC635
7100	4822 209 61759	SAA7310GP/H5
7101	4822 130 42131	BF550
7102	4822 209 70422	MN4264-15
7131	4822 209 83274	NJM4560D
7132	4822 130 44121	BC338
7133	4822 130 44104	BC328
7134	5322 130 42012	BC858A
7135	5322 130 42012	BC858A
7136	4822 130 61207	BC848
7201	4822 209 30939	SM5840AS
7202	5322 209 12099	MC74HC164D
7203	5322 209 12099	MC74HC164D
7204	4822 209 30739	MC74HC04AD
7211	4822 209 62588	PCF3523P
7212	4822 130 61207	BC848
7213	4822 209 31284	MC74HC08AD
7300	4822 209 31356	SAA7350/AGP
7302	4822 209 83163	LM833N
7303	4822 209 83163	LM833N
7304	4822 130 42696	BC818-25
7305	4822 130 42696	BC818-25
7306	4822 130 42696	BC818-25
7307	4822 130 42696	BC818-25
7308	4822 130 61207	BC848
7309	4822 130 61207	BC848
7310	5322 130 42012	BC858
7311	5322 130 42012	BC858
7382	4822 130 42696	BC818-25
7383	4822 130 42696	BC818-25
7520	4822 130 60492	BC376
7521	4822 209 80891	MC78M05CT
7522	4822 209 73233	MC79L05ACP
7525	5322 130 41982	BC848B
7526	5322 130 41982	BC848B
7527	5322 130 41982	BC848B
7541	4822 209 62115	MC79L15ACP
7561	5322 130 41982	BC848B
7562	5322 130 42012	BC858
7600	4822 209 62059	TCA0372DP1
7701	4822 900 10388	MC68HC05C8P/S05 PROM
7702	4822 209 72042	MC78L05ACP
7721	5322 130 42012	BC858
7731	4822 209 31249	MC68HC05D24P/ZC410915
7732	5322 130 42012	BC858
7751	4822 209 62524	X24C16P
7761	5322 130 42012	BC858
7762	4822 130 61207	BC848
7763	5322 130 41982	BC848B

DISPLAY PANEL

MISCELLANEOUS

	4822 256 91848	DISPLAY HOLDER
1401	4822 242 72527	RESONATOR 4MHz
1402	4822 130 91073	DISPLAY CD930
1403	4822 267 50723	CONNECTOR 13P
1404	4822 267 40624	RFK5 CONNECTOR
1405	4822 267 40624	RFK5 CONNECTOR
1406	4822 267 40624	RFK5 CONNECTOR
1407	4822 267 40624	RFK5 CONNECTOR
1410	4822 276 13114	TACT SWITCH
1411	4822 276 13114	TACT SWITCH
1412	4822 276 13114	TACT SWITCH
1413	4822 276 13114	TACT SWITCH
1414	4822 276 13114	TACT SWITCH
1415	4822 276 13114	TACT SWITCH
1416	4822 276 13114	TACT SWITCH
1417	4822 276 13114	TACT SWITCH
1418	4822 276 13114	TACT SWITCH
1419	4822 276 13114	TACT SWITCH
1420	4822 276 13114	TACT SWITCH
1421	4822 276 13114	TACT SWITCH
1451	4822 214 51772	IR RECEIVER GP1U521X

CAPACITORS

2401	4822 122 10166	22nF	30%	16V
2404	5322 124 21643	22µF	20%	40V
2405	4822 122 10166	22nF	30%	16V
2406	5322 124 21643	22µF	20%	40V
2407	4822 122 10166	22nF	30%	16V
2408	4822 122 10166	22nF	30%	16V
2409	4822 122 10177	10nF	20%	25V
2451	5322 124 21643	22µF	20%	40V
2452	4822 122 10166	22nF	30%	16V

RESISTORS

3401	4822 052 10478	4Ω7	5%	0,33W
3402	4822 050 22204	220k	1%	0,6W
3403	4822 050 22203	22k	1%	0,6W
3404	4822 050 22203	22k	1%	0,6W
3405	4822 050 21002	1k	1%	0,6W
3406	4822 050 22203	22k	1%	0,6W
3407	4822 050 22203	22k	1%	0,6W
3408	4822 050 22203	22k	1%	0,6W
3409	4822 050 22203	22k	1%	0,6W
3411	4822 052 10109	10Ω	5%	0,33W
3412	4822 116 52234	100k	5%	0,5W
3414	4822 051 10101	100Ω	2%	0,25W
3415	4822 116 52234	100k	5%	0,5W
3417	4822 051 10101	100Ω	2%	0,25W
3418	4822 116 52234	100k	5%	0,5W
3420	4822 051 10101	100Ω	2%	0,25W
3421	4822 116 52234	100k	5%	0,5W
3422	4822 051 10101	100Ω	2%	0,25W
3423	4822 116 52234	100k	5%	0,5W
3425	5322 111 90473	8x10k	2%	NETWORK
3426	4822 052 10478	4Ω7	5%	0,33W
3427	4822 052 10478	4Ω7	5%	0,33W
3428	4822 050 24702	4k7	1%	0,6W
3429	4822 050 24703	47k	1%	0,6W
3430	4822 050 23302	3k3	1%	0,6W
3431	4822 050 23302	3k3	1%	0,6W
3432	4822 050 23302	3k3	1%	0,6W
3451	4822 052 10478	4Ω7	5%	0,33W
3452	4822 050 24702	4k7	1%	0,6W

DIODES

6401	4822 130 30621	1N4148
6402	4822 130 30621	1N4148
6403	4822 130 30621	1N4148

TRANSISTORS & IC'S

7401	4822 209 30249	TMP47C212AN
7402	4822 209 30733	74HC164N
7403	4822 209 60886	UDN-2580A
7405	4822 130 40941	BC558
7406	4822 130 40938	BC548
7407	4822 130 40938	BC548
7408	4822 130 40938	BC548
7409	4822 130 40938	BC548

KEYBOARD PANEL

MISCELLANEOUS

1422	4822 276 13114	TACT SWITCH
1423	4822 276 13114	TACT SWITCH
1424	4822 276 13114	TACT SWITCH
1425	4822 276 13114	TACT SWITCH
1426	4822 276 13114	TACT SWITCH
1427	4822 276 13213	SWITCH
1428	4822 276 13213	SWITCH
1429	4822 276 13213	SWITCH
1430	4822 276 13213	SWITCH
1431	4822 276 13213	SWITCH
1432	4822 276 13213	SWITCH
1433	4822 276 13114	TACT SWITCH
1434	4822 276 13114	TACT SWITCH
1435	4822 276 13213	SWITCH
1436	4822 276 13114	TACT SWITCH
1437	4822 276 13114	TACT SWITCH
1438	4822 276 13114	TACT SWITCH
1439	4822 276 13114	TACT SWITCH

DIODES

6404	4822 130 30621	1N4148
6405	4822 130 30621	1N4148
6406	4822 130 30621	1N4148
6407	4822 130 30621	1N4148
6408	4822 130 30621	1N4148

HEADPHONE PANEL

MISCELLANEOUS

BU-5	4822 267 31453	HEADPHONE SOCKET
1310	4822 267 40624	RFK5 CONNECTOR

CAPACITORS

2382	4822 122 10166	22nF	30%	16V
2383	4822 122 10166	22nF	30%	16V

RESISTORS

3381	4822 102 10398	10k LOG POTMETER		
3382	4822 116 52244	15k	5%	0,5W
3383	4822 116 52244	15k	5%	0,5W
3384	4822 050 21003	10k	1%	0,6W
3385	4822 050 21003	10k	1%	0,6W
3386	4822 050 21201	120Ω	1%	0,6W
3387	4822 050 21201	120Ω	1%	0,6W
3388	4822 051 10101	100Ω	2%	0,25W
3389	4822 051 10101	100Ω	2%	0,25W
3390	4822 052 10228	2Ω2	5%	0,33W
3391	4822 052 10228	2Ω2	5%	0,33W

IC

7380	4822 209 82362	NJM4556D

MISCELLANEOUS

SK-1	4822 276 13216	MAINS SWITCH
21	4822 256 30274	FUSE HOLDER
1010	4822 277 21366	VOLTAGE SELECTOR
1010	4822 462 41505	COVER
1010	5322 256 34058	FUSE HOLDER
1010	5322 462 44478	FUSE CAP
1501	4822 070 31251	FUSE 125mA
5001	4822 146 31045	MAINS TRANSFORMER
5001	4822 146 31153	MAINS TRAFO /01
5502	4822 214 51841	MAINS FILTER

Modifications with A92-255

Page	Reason
Frontpage	/01S added.
2a	/01S added.
4a	Warning Class 3B Laser product added.
19a	Voltage selector added.
20a	Oscillogram of eyepattern adapted.
21a,22a,23a	R3151, R3221, R3210 added; R3150 adapted. D6201 added; oscillograms of eyepattern, WSAB,CLAB adapted.
24a,25a,26a	R3309, C2301, L5302, D6700 added.
27-1,28-1,29-1 30-1,31-1,32-1	Main panel: lay-out L3 introduced in week 9226 with printlabel H for /00S and with printlabel B for /05S and /01S.
44a,45a	Position 99 added.
46a	Clamping piece and CDM 9 changed.
49a	C2210, C2301 added; C2302, C2310, C2311 adapted.
50a	R3094 correction.
51a	R3151, R3210, R3221, R3309 added; R3150 adapted.
52a	L5302 added; D6201 added.
53a	D6700 added;T7136 added; T7213,T7763 adapted.
55a	Voltage selector,cover, fuse holder, fuse cap, mains transfo /01S added.
56	Modifications A92-255 added

Modifications with A93-252

1. Tray detection switch connected to +5V instead of ground, introduced with Lay-out .4 of main panel from production week 9304 onwards.

The following components have been added with L4:	R3151, R3711, D6700, T7136, wire bridge 9129
The following component has been deleted:	R3709

2. Introduction of digital silence detection circuit together with the modification of IC7300 from SAA7350 to SAA7350/AGP. The latter is the latest version of this IC and is compatible with all earlier versions. It can only be replaced by the same version to guarantee a good performance of the digital mute.
   The digital mute circuit consists of the following components: R3346, R3347, T7308, T7309.
   The following components have been deleted: R3352, wirebridges 9510 and 9511.

   This modification has been introduced from production week 9326 onwards.
   The label on the modified sets reads as follows: **AH02** for CD930/00S/05S/01S
   AH01 for CD930/06S/13S

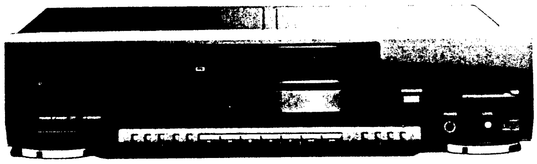
Page	Reason
15-1, 16-1	Tray detection switch connected to +5V and digital mute added
17-1	Wiring of tray switch changed
18-1	D6544 changed to F6V8 to avoid flickering of the display.
21-1, 22-1, 23-1	R3711 added, R3709 deleted, connector 1701 pin 2 connected to +5V.
24-1, 25-1, 26-1	IC7300 changed; R3346, R3347, T7308, T7309 added; R3352, wire bridges 9510, 9511 deleted.
27-2, 28-2, 29-2	Main panel L5(is the same as L4 apart from extra cupper around the cinch sockets)
30-2, 31-2, 32-2	Main panel L5 solder side(= L4)
51b	R3346, R3347 added; R3352 deleted
52b	R3711 added; R3709 deleted.
53b	D6544, IC7300 changed; T7308, T7309 added.
56a	Modifications A93-252 added

Compact disc player CD951

/00S/01S/06S/13S

V01909

Service



Service Manual

For the apparatus CD951/00S/01S/06S/13S, we refer to Service Manual 4822 725 24007 of CD950/00S.
Differences: IR SENSOR switch SK-2 has been integrated in ESI BUS sockets 1704 and 1705.
Fast search has been added, Audio specifications have been improved and lay-out of main panel has been changed.

The following mechanical parts are different:

ITEM 1	4822 444 40551	ALU FRONT /00S/01S/06S
	4822 444 40629	ALU FRONT /13S
ITEM 13	4822 444 40549	FRONT /00S/01S/06S
	4822 444 40739	FRONT /13S
ITEM 71	4822 444 30482	TRAY FRONT
ITEM 283	4822 532 60948	CORD BUSHING /00S
	4822 325 60329	CORD BUSHING /01S/06S/13S
ITEM 300	4822 321 10809	MAINS CORD /00S
	4822 321 10845	MAINS CORD /01S
ITEM 304	4822 321 10917	MAINS CORD /13S
ITEM 305	4822 321 10919	MAINS CORD /06S
ITEM 306	4822 263 50179	SOCKET ADAPTER MAINS /13S
ITEM 340	4822 736 21961	INSTRUCTIONS FOR USE /00S
	4822 736 22031	INSTRUCTIONS FOR USE /01S
	4822 736 22029	INSTRUCTIONS FOR USE /06S
	4822 736 21961	INSTRUCTIONS FOR USE /13S

For difference of electrical parts, see modified circuit diagrams, Main Panel drawing and electrical parts list.

Power supply: changed: D6543, D6544.
Servo: added: R3069,3070,3071; IC7005; T7088.(fast search)
Decoder: R3110,3111,3112,3113,3114,3115,3221,3222,3223,3224,3225 changed into wire bridge.
added: C2205,2216,2217; R3217,3226,3227.
changed: IC7202,7203,7204,7211.
Audio: deleted: SK-2.
added: C2256; R3253,3732; socket 1705(BU-3).
changed: sockets 1201(BU-4),1301(BU-2),1704(BU-3), IC 7302,7303.
General: All elcaps of 33μF 16V are changed into 47μF.

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PHILIPS

PCS 60 652

POWER SUPPLY CD951

1511	K 1
1511	E 1
1511	D 1
1511	B 1
1511	A 1
1511	A 1
1511	I 1
1511	G 1
1530	F 7
2511	E 3
2512	F 3
2513	H 3
2514	J 3
2515	C 3
2516	D 3
2517	J 3
2518	K 3
2520	E 4
2523	F 6
2525	I 5
2526	I 5
2527	I 7
2528	I 7
2530	F 5
2531	F 6
2532	D 5
2533	D 5
2534	D 7
2535	D 7
2536	K 5
2537	K 5
2538	K 7
2539	K 7
2540	G 9
2542	B 2
2543	B 3
2544	B 3
2545	B 4
2546	C 4
2547	B 5
2548	B 5
2549	A 4
2561	B 6
2562	B 7
2563	B10
3520	G 7
3521	F 9
3522	G 9
3523	G10
3524	G 9
3525	G 5
3526	G 6
3527	G 6
3528	G 6
3529	F 7
3530	E 7
3531	E 6
3541	A 3
3561	B 6
3562	B 6
3563	B 7
3564	B 7
3565	C 9
3566	C 9
3567	B 9
6511	E 3
6512	F 3
6513	I 3
6514	I 3
6515	D 3
6516	D 3
6517	J 3
6518	K 3
6521	G 9
6522	E 6
6541	B 2
6543	C 4
6544	A 4
6561	B 6
6562	B 7
6563	A 6
6564	A 6
6565	A 9
6566	A10
6567	B10
6568	B 8
7522	I 6
7526	E 5
7527	C 6
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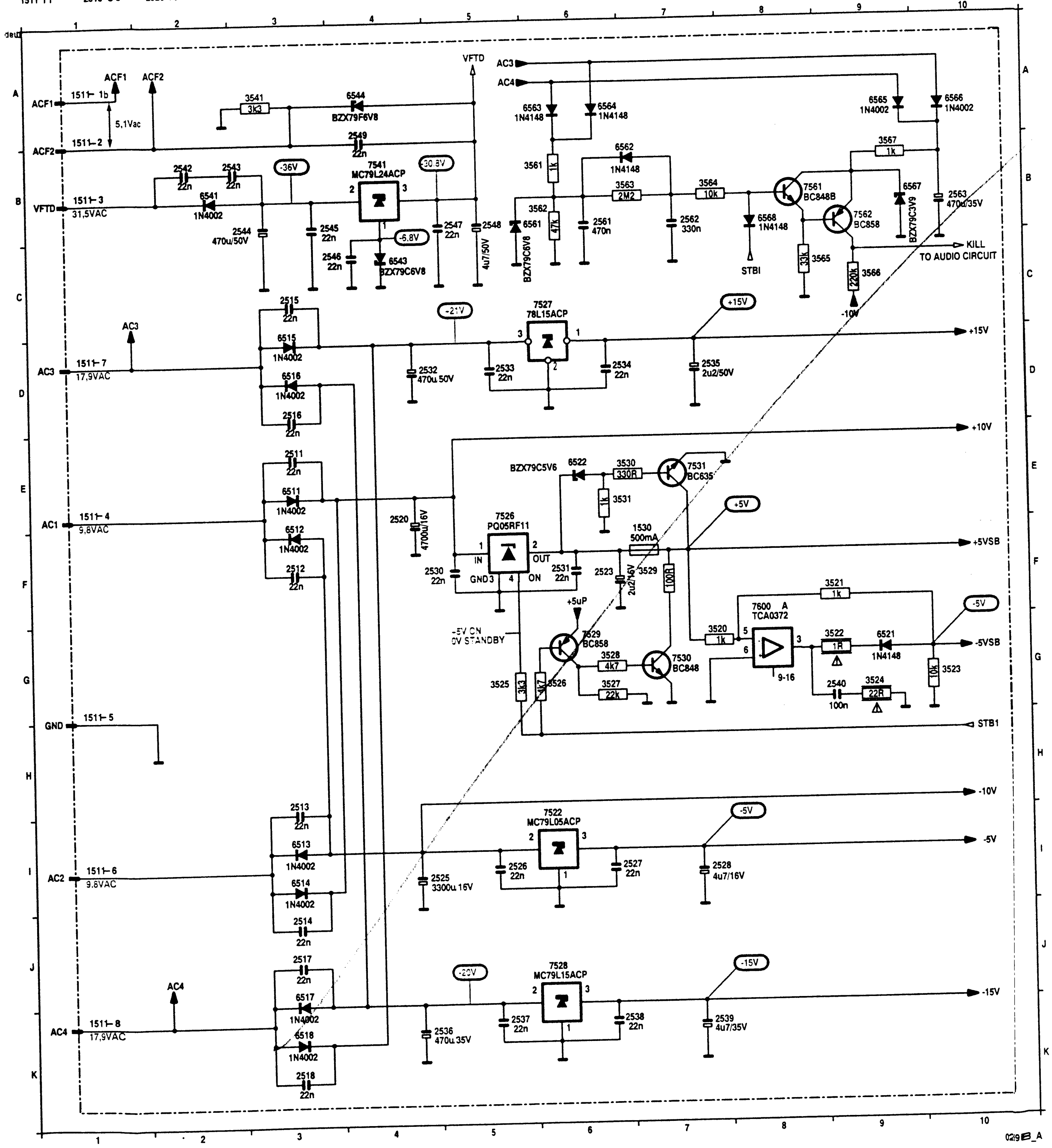
7531	E 7
7541	B 4
7561	B 8
7562	B 9
7600	F 8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2
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6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
ACF1
ACF2
1511-1b
5,1Vac
ACF1
1511-2
ACF2
VFTD
1511-3
31,5VAC
3541
3k3
6544
BZX79F6V8
2549
22n
VFTD
2542
22n
2543
22n
-36V
6541
1N4002
2544
470u/50V
2545
22n
7541
MC79L24ACP
-30,8V
2547
22n
2548
4u7/50V
-6,8V
2546
22n
6543
BZX79C6V8
AC3
AC4
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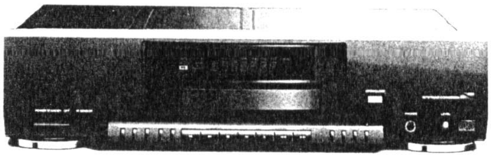
6564
1N4148
3561
1k
6562
1N4148
3562
47k
6561
BZX79C6V8
3563
2M2
2561
470n
2562
330n
3564
10k
6568
1N4148
STBI
7561
BC848B
3567
1k
7562
BC858
6567
BZX79C3V9
6565
1N4002
6566
1N4002
2563
470u/35V
KILL
TO AUDIO CIRCUIT
33k
3565
220k
3566
-10V
AC3
1511-7
17,9VAC
2515
22n
6515
1N4002
6516
1N4002
2516
22n
-21V
2532
470u 50V
7527
78L15ACP
2533
22n
2534
22n
+15V
2535
2u2/50V
+15V
+10V
2511
22n
6511
1N4002
AC1
1511-4
9,8VAC
6512
1N4002
2512
22n
2520
4700u/16V
BZX79C5V6
6522
3530
330R
3531
1k
7531
BC635
+5V
7526
PQ05RF11
IN
OUT
GND3
ON
2530
22n
2531
22n
1530
500mA
2523
2u2/16V
3529
100R
+5VSB
+5uP
-5V ON
0V STANDBY
7529
BC858
3528
4k7
3527
22k
7530
BC848
3525
3k3
4k7
3526
3521
1k
7600 A
TCA0372
3520
1k
9-16
3522
1R
6521
1N4148
-5V
-5VSB
3523
10k
2540
100n
3524
22R
STB1
GND
1511-5
-10V
2513
22n
6513
1N4002
AC2
1511-6
9,8VAC
6514
1N4002
2514
22n
2525
3300u 16V
7522
MC79L05ACP
2526
22n
2527
22n
-5V
2528
4u7/16V
-5V
2517
22n
6517
1N4002
AC4
1511-8
17,9VAC
6518
1N4002
2518
22n
-20V
2536
470u 35V
7528
MC79L15ACP
2537
22n
2538
22n
-15V
2539
4u7/35V
-15V
0269B_A

0269R-A

V14573

Compact disc player CD950/00S/05S/10S/17S

Service
Service
Service



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PHILIPS

PCS 60 130

TECHNICAL SPECIFICATIONS

General

1.Mains voltage /00S : 230V (+6 -10%)
/05S/10S : 240V (±10%)
/17S : 117V (±10%)
2.Mains frequency : 50-60 Hz
3.Mains voltage selection : See circuit diagram Power Supply
4.Power consumption mains,operated : 10W

External RC-5 connection

Specification: V-in Low : from -2,0V to +1,6V
V-in High : from +3V to +7,5V
R-in : from 47kΩ to 68kΩ

Line output

1. Number of channels : 2
2. Output voltage : 2 Vrms ± 1,5dB
3. Unbalance left-right : max. 0,2dB
4. Output resistance : 200Ω
5. Amplitude linearity : max. ± 0,2dB from 20 Hz to 20 kHz
6. Phase non-linearity : max. ± 1,5° from 20 Hz to 20 kHz
7. Signal to noise ratio : min. 105dB from 20 Hz to 20 kHz
8. Dynamic range (-60dB) : min. 92dB from 20 Hz to 20 kHz
9. Total harmonic distortion + noise : min. 90dB from 20 Hz to 20 kHz
10. Intermodulation distortion : min. 90dB from 20 Hz to 20 kHz
11. Out-band attenuation : min. 55dB (above 24,2 kHz)
12. Channel separation : min. 105dB (1 kHz)
13. Automatic switched de-emphasis with time constants : 15/50 µs
14. Non-linearity on -90dB : ± 1dB

Variable headphone

1. Output voltage : max. 5 Vrms ± 2dB
2. Unbalance left-right : max. ± 0,6dB
3. Output resistance : 120Ω
4. Load impedance range : 32Ω to 600Ω load
5. Output power : 0 to 50 mW into 30Ω load
: 0 to 90 mW into 120Ω load
: 0 to 50 mW into 600Ω load

Audio specs in case of 600Ω load at 4 Vrms voltage output
6. Signal to noise ratio : min 95 dB
7. Dynamic range : min 90 dB (20 Hz -20 kHz)
8. Total harmonic distortion : min 88 dB (20 Hz - 20 kHz)
9. Intermodulation distortion : min 88 dB (20 Hz - 20 kHz)
10. Channel separation : min 70 dB (1 kHz)
: min 65 dB (31,5 Hz - 16 kHz)

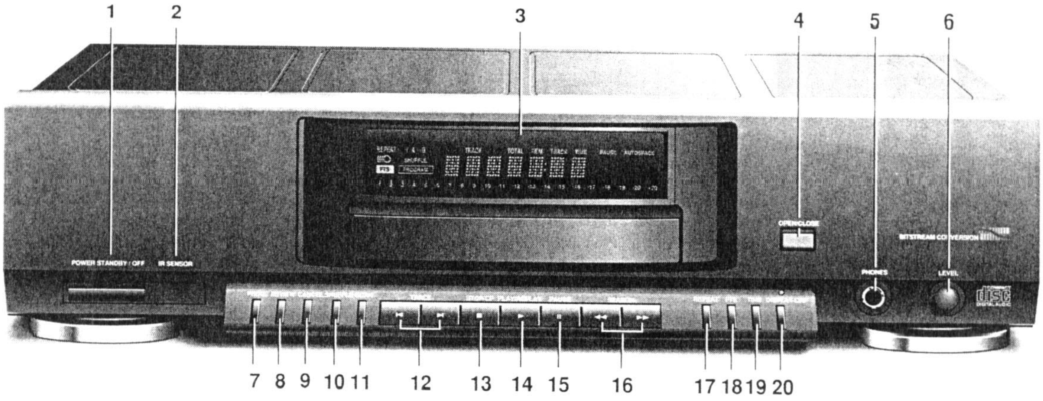
Dimensions and weight

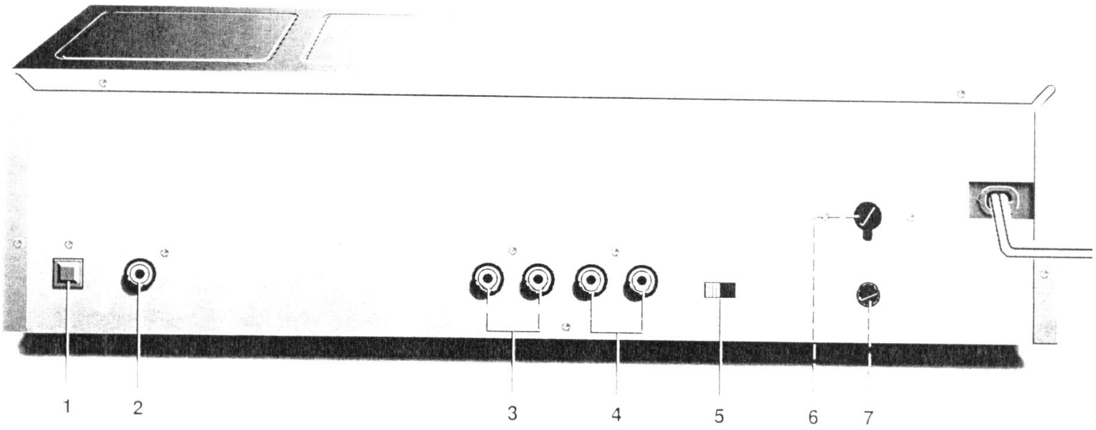
1. Apparatus tray closed : WxDxH 435 x 300 x 90/106 mm
2. Apparatus tray open : WxDxH 435 x 445 x 90/106 mm
3. Weight : 4 kg

Optical read-out system

1.Laser type : Semiconductor AlGaAs
2.Wavelength : 780 nm ± 20 nm
3.Light output (c.w.) : max. 0,5 mW

CONTROLS & CONNECTIONS


1
2
3
4
5
6
POWER STANDBY / OFF
IR SENSOR
OPEN/CLOSE
PHONES
LEVEL
7
8
9
10
11
12
13
14
15
16
17
18
19
20



CONTROLS

Indication on App.	Indication in diagram
1. POWER STANDBY/OFF	SK-1
2. I(nfra)R(ed)SENSOR	1451
3. Display	1402
3. OPEN/CLOSE	1426
5. PHONES	BU-5
6. LEVEL	3381
7. PROG(ram)	1413
8. REVIEW	1411
9. CANCEL	1410
10. SHUFFLE	1412
11. SCAN	1416
12. < TRACK >	1414 1415
13. STOP/CP	1417
14. PLAY/REPLAY	1421
15. PAUSE	1420
16. << SEARCH >>	1419 1418
17. REPEAT	1422
18. FTS	1425
19. TIME	1424
20. DISPLAY OFF	1423

CONNECTIONS

Indication on App.	Indication in diagram
1. DIGITAL OUT OPTICAL	BU-6
2. DIGITAL OUT	BU-4
3. ANALOG OUT	BU-2
4. ESI BUS	BU-3
5. IR SENSOR OFF ON	SK-2
6. Voltage selector(not all versions)	
7. Mains fuse holder(not all versions)	

(GB) **WARNING**

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

(F) **ATTENTION**

Tous les IÇ et beaucoup d'autres semi-conducteurs sont sensibles aux decharges statiques (ESD).
Leur longevité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise a leur manipulation.
Lors de reparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de securite.
Veiller a ce que les composants ainsi que les outils que l'on utilise soient egalement a ce potentiel.

ESD

(D) **WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) **WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) **AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiago identici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

S Varning!

Osynlig laserstralning när apparaten är öppnad och spärrenär urkopplad.
Betrakta ej strälen.

SF Varo!

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle.Alä katso säteeseen!

DK Adversel!

Usynlig laserstraling ved abning. Undga unsaettelse for straling.

DANGER
Invisible laser radiation when open.
Avoid direct exposure to beam

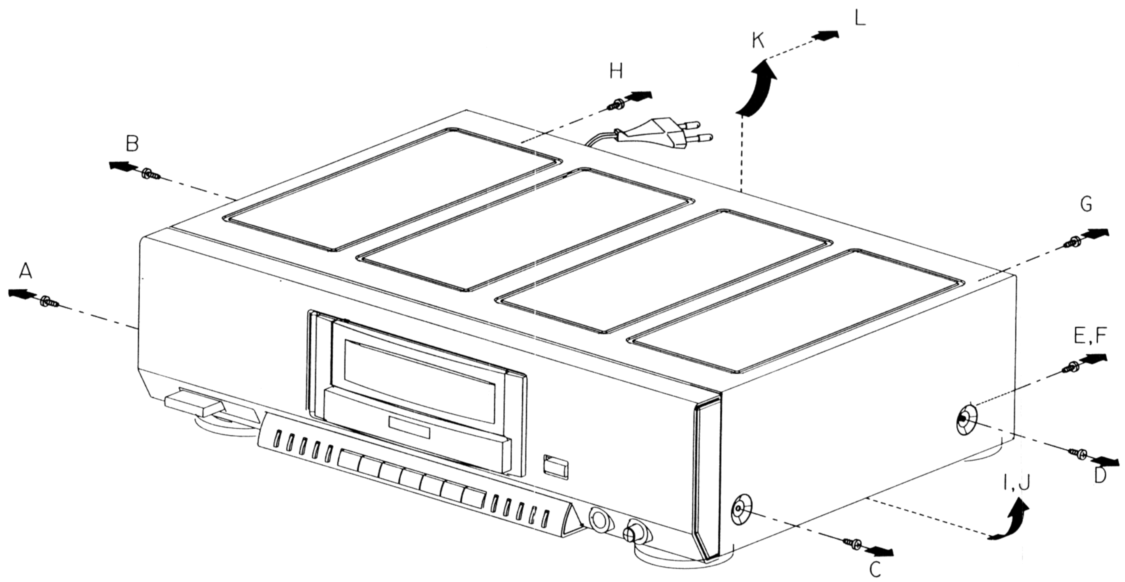
CAUTION
Invisible laser radiation when open.
Avoid exposure to beam.

CLASS 1
LASER PRODUCT
3122 110 03420

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

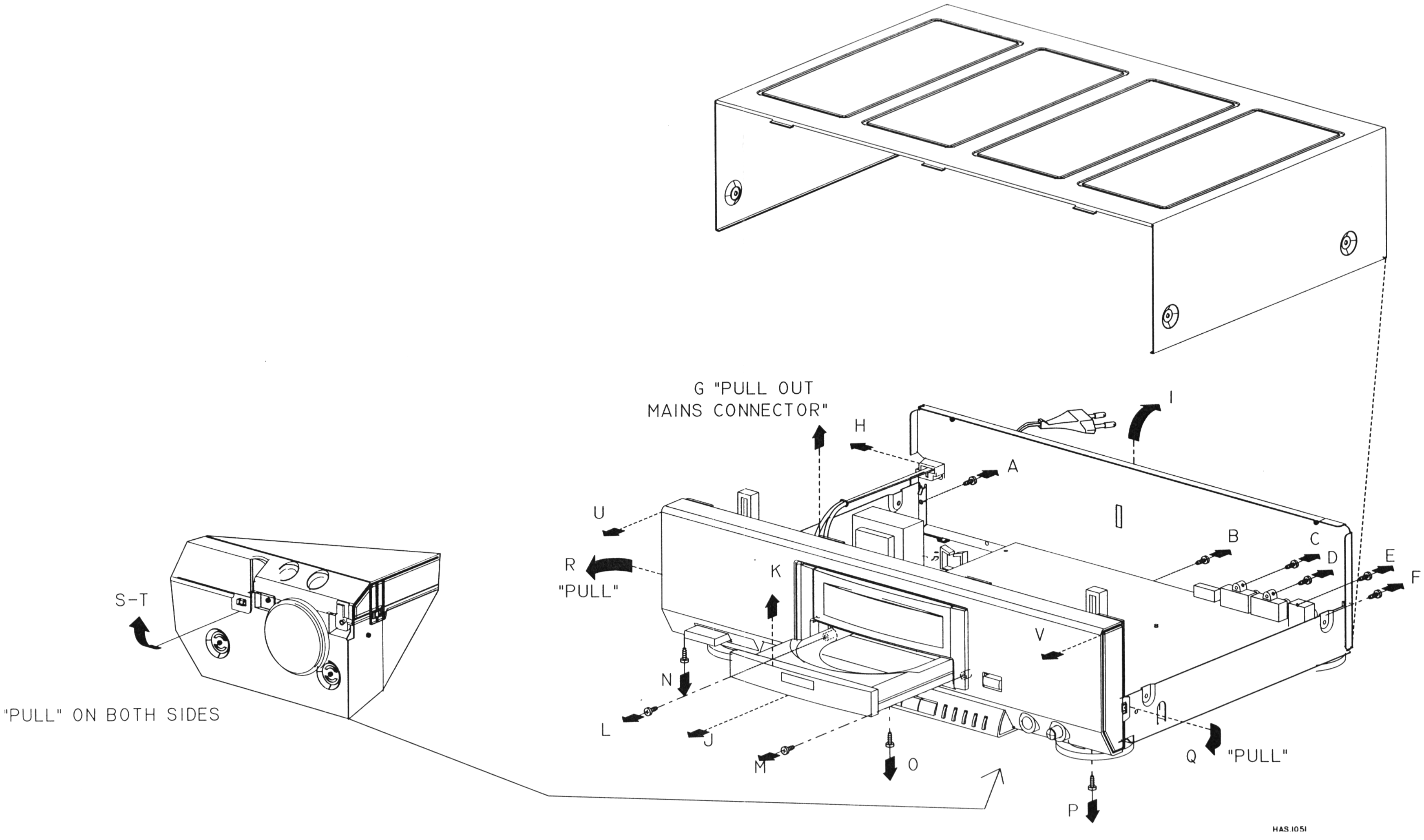
DISMANTLING INSTRUCTIONS

DEMOUNTING OF COVER

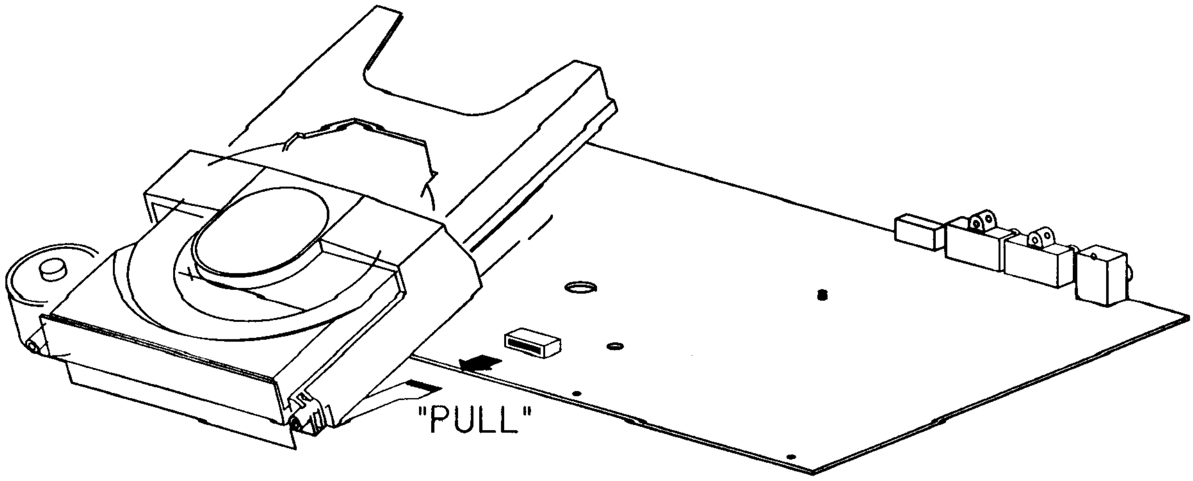

L
K
H
B
G
A
E,F
I,J
D
C

HAS I050

DEMOUNTING OF BACKPLATE AND FRONT

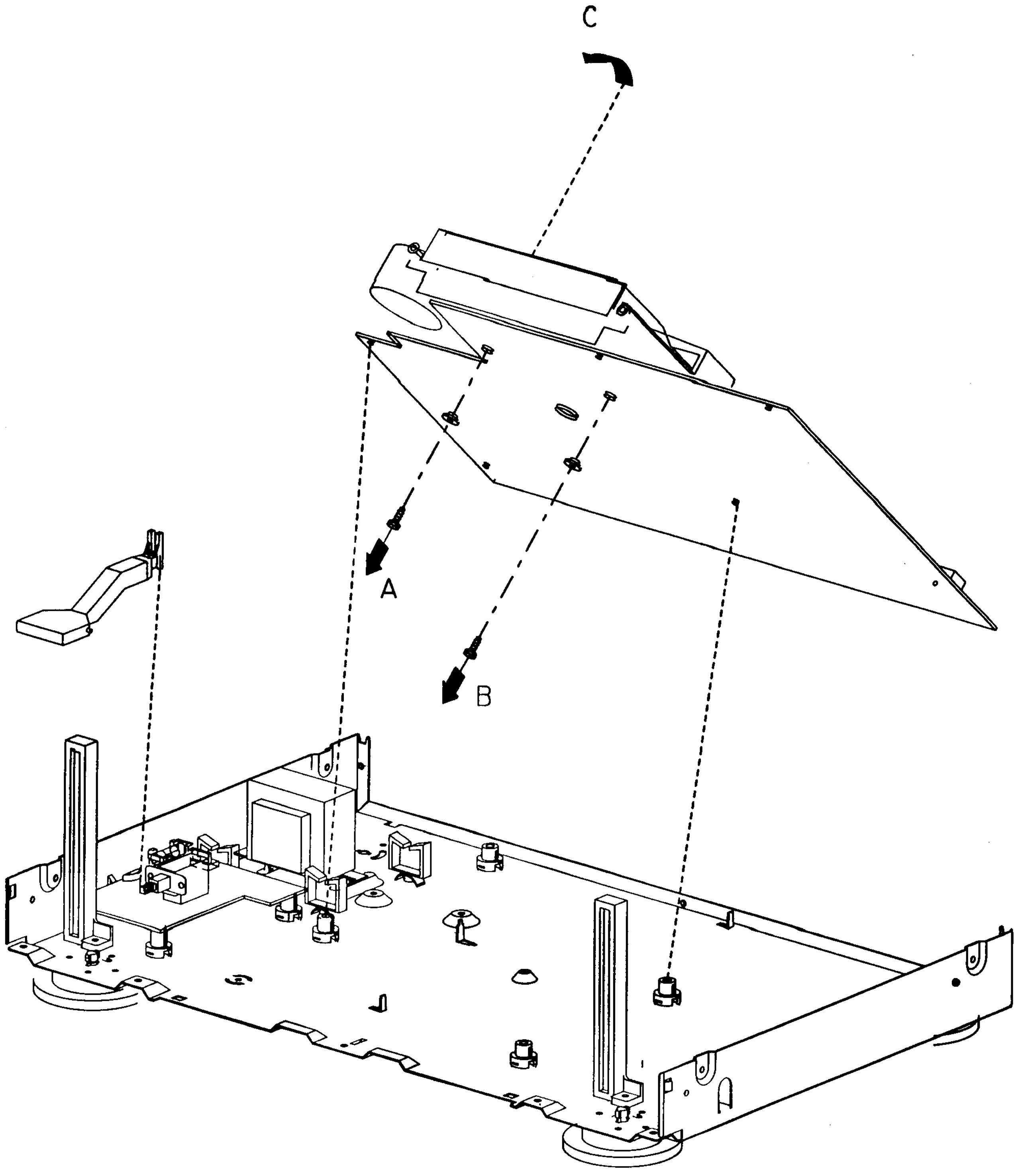

G "PULL OUT
MAINS CONNECTOR"
H
I
A
U
R
"PULL"
K
B
C
D
E
F
V
S-T
"PULL" ON BOTH SIDES
N
L
J
M
O
Q
"PULL"
P
HAS 1051

REMOVING FLEX FROM CONNECTOR



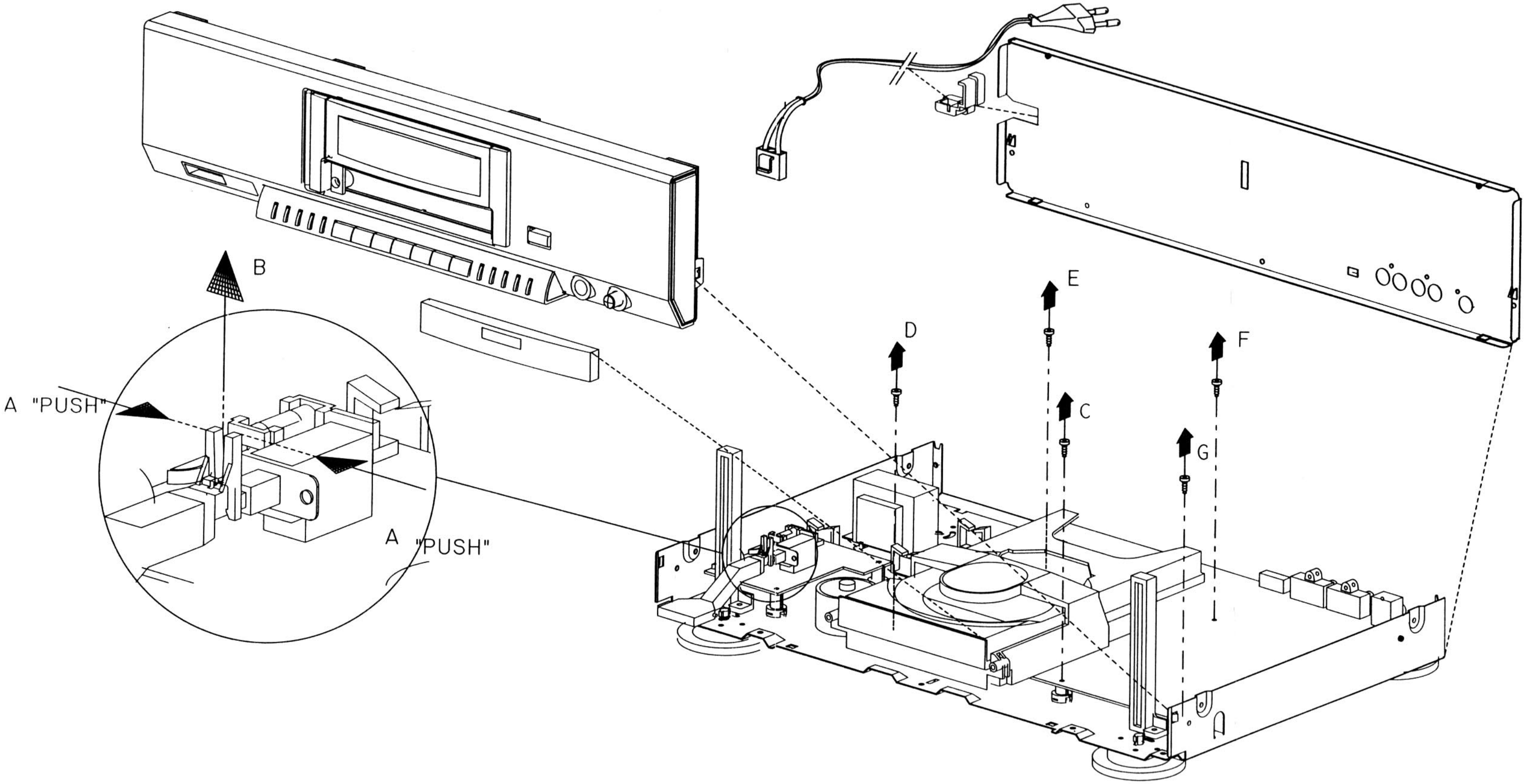
HAS.1054

DEMOUNTING OF LOADER



HAS.1053

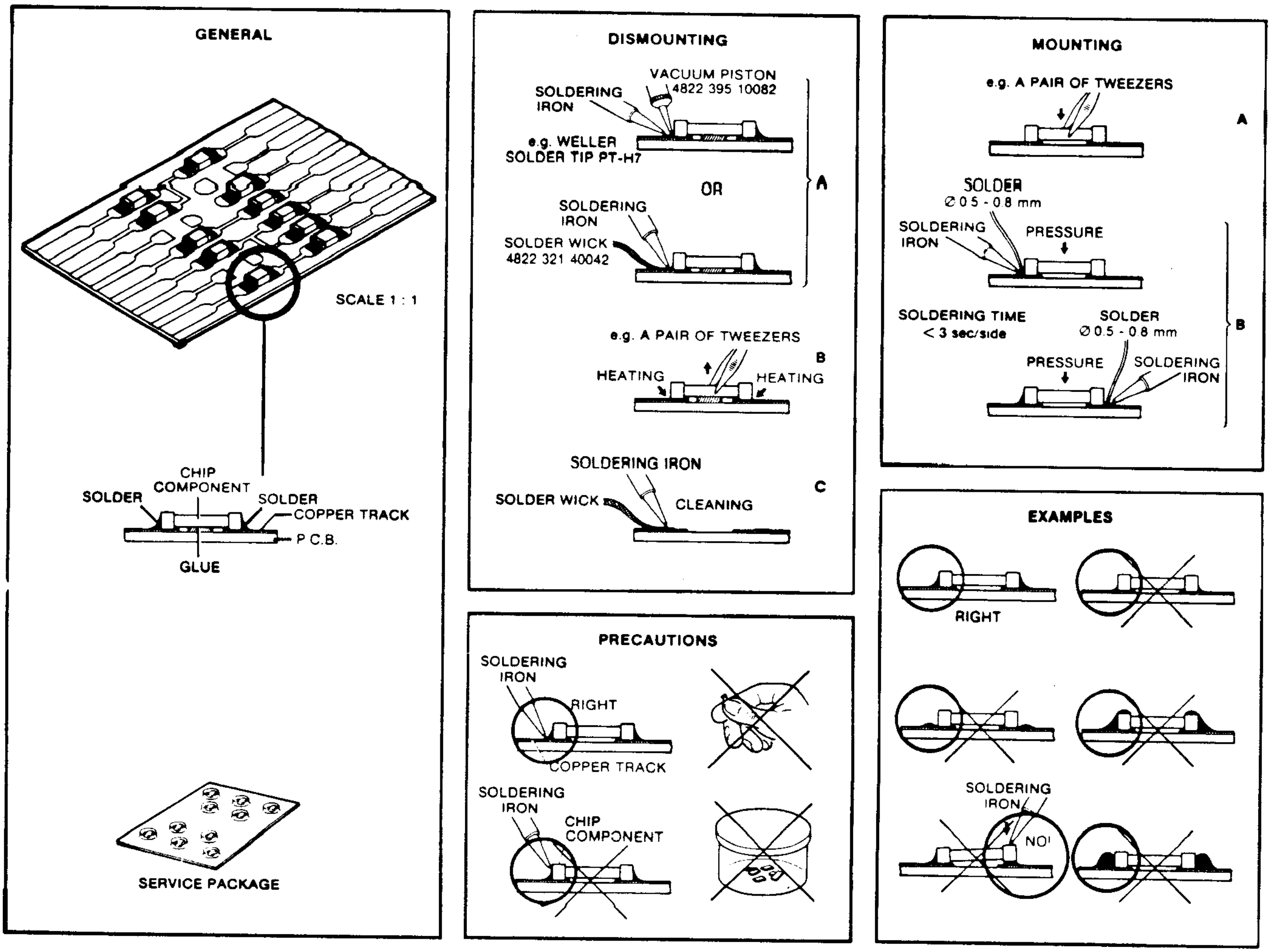
DEMOUNTING OF POWERROD AND MONOBOARD


B
A "PUSH"
A "PUSH"
D
E
F
C
G

HAS.I052

SERVICING HINTS

In the set chip components have been applied. For disassembly and assembly of chip components see the figure below.


GENERAL
SCALE 1 : 1
CHIP COMPONENT
SOLDER
SOLDER
COPPER TRACK
P C.B.
GLUE
SERVICE PACKAGE
DISMOUNTING
VACUUM PISTON 4822 395 10082
SOLDERING IRON
e.g. WELLER SOLDER TIP PT-H7
OR
A
SOLDERING IRON
SOLDER WICK 4822 321 40042
e.g. A PAIR OF TWEEZERS
B
HEATING
HEATING
SOLDERING IRON
C
SOLDER WICK
CLEANING
MOUNTING
e.g. A PAIR OF TWEEZERS
A
SOLDER
Ø 0 5 - 0 8 mm
SOLDERING IRON
PRESSURE
SOLDERING TIME
< 3 sec/side
SOLDER
Ø 0.5 - 0 8 mm
B
PRESSURE
SOLDERING IRON
PRECAUTIONS
SOLDERING IRON
RIGHT
COPPER TRACK
SOLDERING IRON
CHIP COMPONENT
EXAMPLES
RIGHT
SOLDERING IRON
NO!

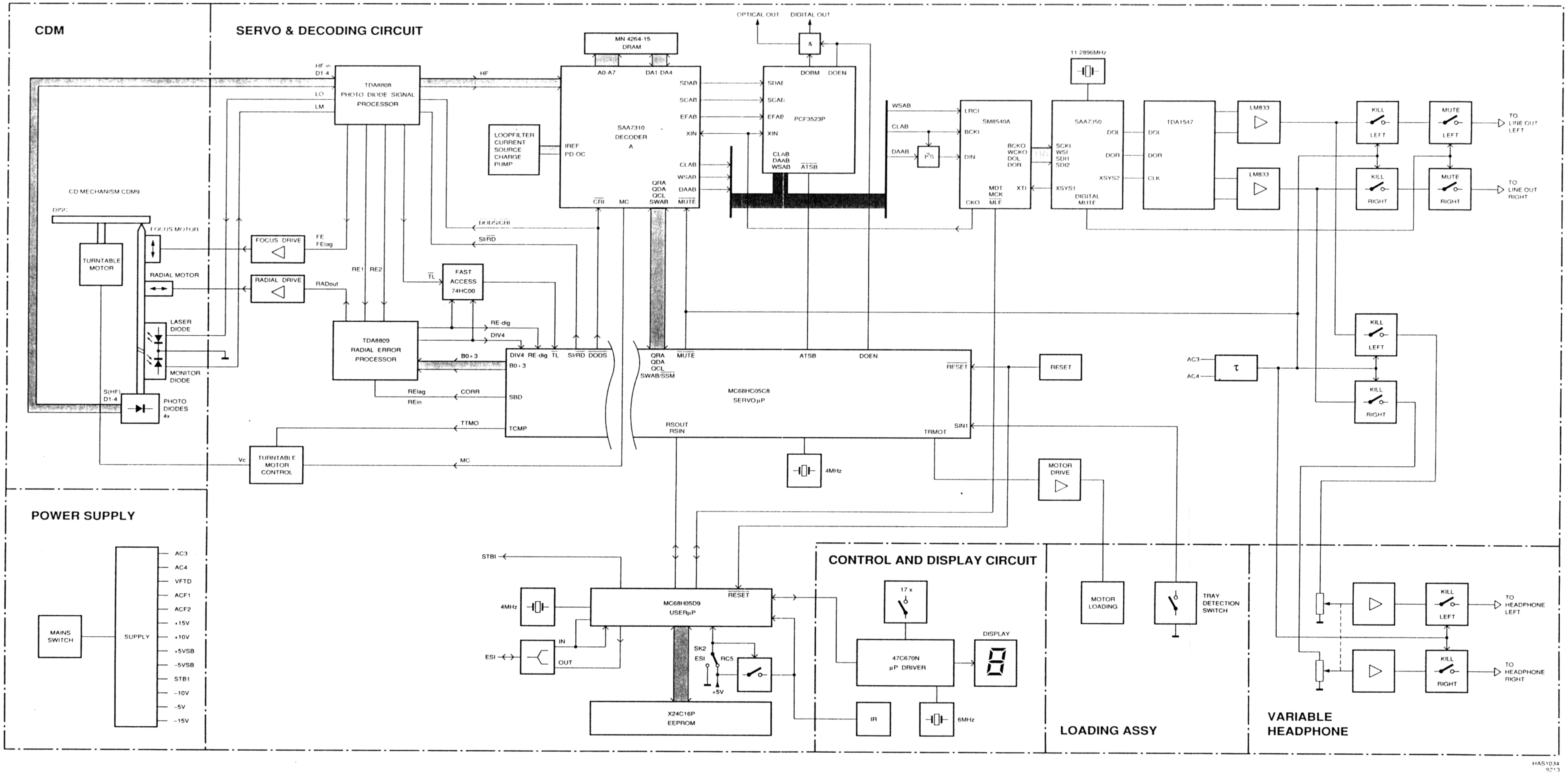
27 012C12

SERVICE TOOLS

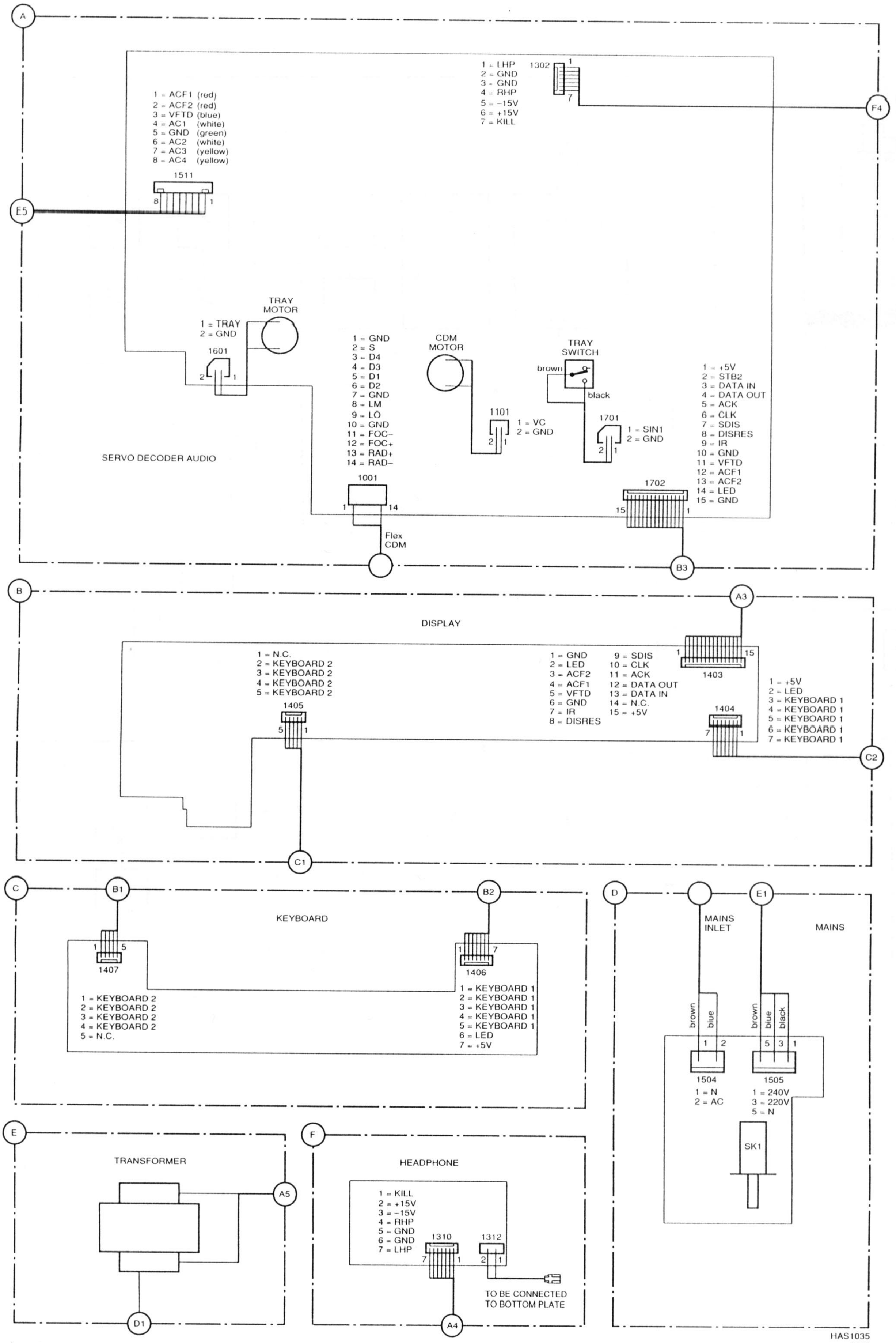
Audio signal disc	4822 397 30184
Disc without errors (test disc 5) + disc with DO errors, black spots and fingerprints (test disc 5A	4822 397 30096
Disc (65 min 1kHz)without pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
Service cable (4p)	4822 321 21284
Service flexfoil (14p)	4822 322 40066
Service connector (14p)	4822 267 50676
Green LED CQY G11	5322 130 32182
Infra red remote control e.g.	4822 218 10324

AGC	- Automatic Gain Control
AM	- Additional mute
ATSB	- Attenuation of Audio level in Search position
ATT	- Attenuation
B0-B3	- Control bits for radial circuit
BEQ	- Equalizer reference current input
BCKI	- Input data bit clock
BCKO	- Output data bit clock
BGC	- DC and LF gain control reference input
BSW	- Bandwidth switch turntable motor circuit
CD ROM	- Digital Data information in disc signal switch
CEFM	- Clock Eight-to-Fourteen Modulator
CKO	- Oscillator output clock
CKSL	- Clock frequency
CLAB	- Clock signal Detector-A to Filter-B
CLBD	- Clock signal Filter-B to DAC
CLI	- I^2S serial bit clock input
CORR	- 1/2 bit DAC
Cosc1	- Capacitor wobble oscillator
Cosc2	- Capacitor wobble oscillator
CREF	- Reference current
CRI	- Counter Reset Inhibit
DAAB	- Data signal Decoder-A to Filter-B
DABD	- Data signal Filter-B to DAC
DAI	- I^2S serial data input
DAO	- I^2S serial data output
DEC	- Decoupling input internal bypass
DEEM	- Deemphasis
DET	- HF detector voltage input
DIN	- Input data
DIV4	- Divide by 4 input
DMUTE	- Digital mute
DOBM	- Digital out signal
DOEN	- Digital out enable
DODS	- Drop out detector suppression
D1-4	- Photodiode currents
DOL	- Left channel data output
DOR	- Right channel data output
EFAB	- Error flag Decoder-A to Filter-B
FBL+ -	- Feedback for left positive (negative) switched capacitor integrator
FBR+ -	- Feedback for right positive (negative) switched capacitor integrator
FE	- Focus error signal
FE lag	- Focus error signal for LAG network
HF	- HF output for DEMOD
HFD	- HF detector output for DEMOD
HF-in	- HF current input to HF amplifier
HF-out	- HF amplifier and equalizer voltage output
IDF1-3	- Input data format
NTL+ -	- Output from left positive (negative) switched capacitor integrator
NTR+ -	- Output from right positive (negative) switched capacitor integrator
LM	- Laser monitor diode input
LO	- Laser amplifier current output
LRCI	- Input data word clock
MC	- Motor control signal
MCES	- Motor speed control
MCK	- Mode set bit clock
MDT	- Mode set serial data input
MLE	- Mode set latch enable
MUSB	- Soft mute signal
MUTE	- Mute signal
OUTDL	- Output from the left positive switched capacitor DAC;feedback connection for the left positive OPAMP
OUTDNL	- Output from the left negative switched capacitor DAC;feedback connection for the left negative OPAMP
OUTDR	- Output from the right positive switched capacitor DAC;feedback connection for the right positive OPAMP
OUTDNR	- Output from the right negative switched capacitor DAC;feedback connection for the right negative OPAMP
OUTOPAL	- +Output of the switched capacitor OPAMP
OUTNOPAL	- -Output of the switched capacitor OPAMP
OUTOPAR	- +Output of the switched capacitor OPAMP
OUTNOPAR	- -Output of the switched capacitor OPAMP
PD/OC	- Phase detector - oscillator control
PLLH	- PLL on hold reset
QCL	- Q-channel clock signal
0QDA	- Q-channel data signal
QRA	- Q-channel request aknowledge
RADout	- Output of RE2-RE1 input
RE	- Radial errer signal (Amplified RE2-RE1 currents)
Rosc	- Resistor wobble oscillator
Rwob	- Wobble generator input
RE1	- Radial error signal 1
RE2	- Radial error signal 2
RE dig	- Radial error digital
RE lag	- Radial error signal for LAG network
RST	- Device reset
SBD	- Single Bit Deviation correction
Sc	- Starting up capacitor input
SCAB	- Subcode clock Decoder-A to Filter-B
SCKI	- Bit clock input for serial input interface
SDAB	- Subcode data Decoder-A to Filter-B
SDI1-2	- Serial data input
SIN_	- Tray switch
Si/RD	- On/off control for laser supply and focus circuit. Ready signal. Starting up procedure succesfull
SWAB/SSM	- Subcode word/start-stop motor signal
TL	- Track loss output signal
TRMOT	- Tray motor drive
TTM+	- Control voltage for turntable motor
TTM-	- Control voltage for turntable motor
TTMO	- Motor offset and bandwidth switch
VDACL-R	- Reference voltage supply left(right) channel DAC
Vext+	- Supply connection
Vext-	- Supply connection
VRCL-R	- High impedance voltage refence for left (right) channel inputs
VROL-R	- Left (right) channel voltage reference output
WCKO	- Output word clock
WSAB	- Word select Decoder-A to Filter-B
WSBD	- Word select Filter-B to DAC
WSI	- I^2S word select input
WSO	- I^2S word select output
XIN	- Oscillator signal input
XOUT	- Oscillator output
XSEL	- Crystal frequency select
XSYS	- Oscillator signal
XTI	- Crystal oscillator input
XTO	- Crystal oscillator output

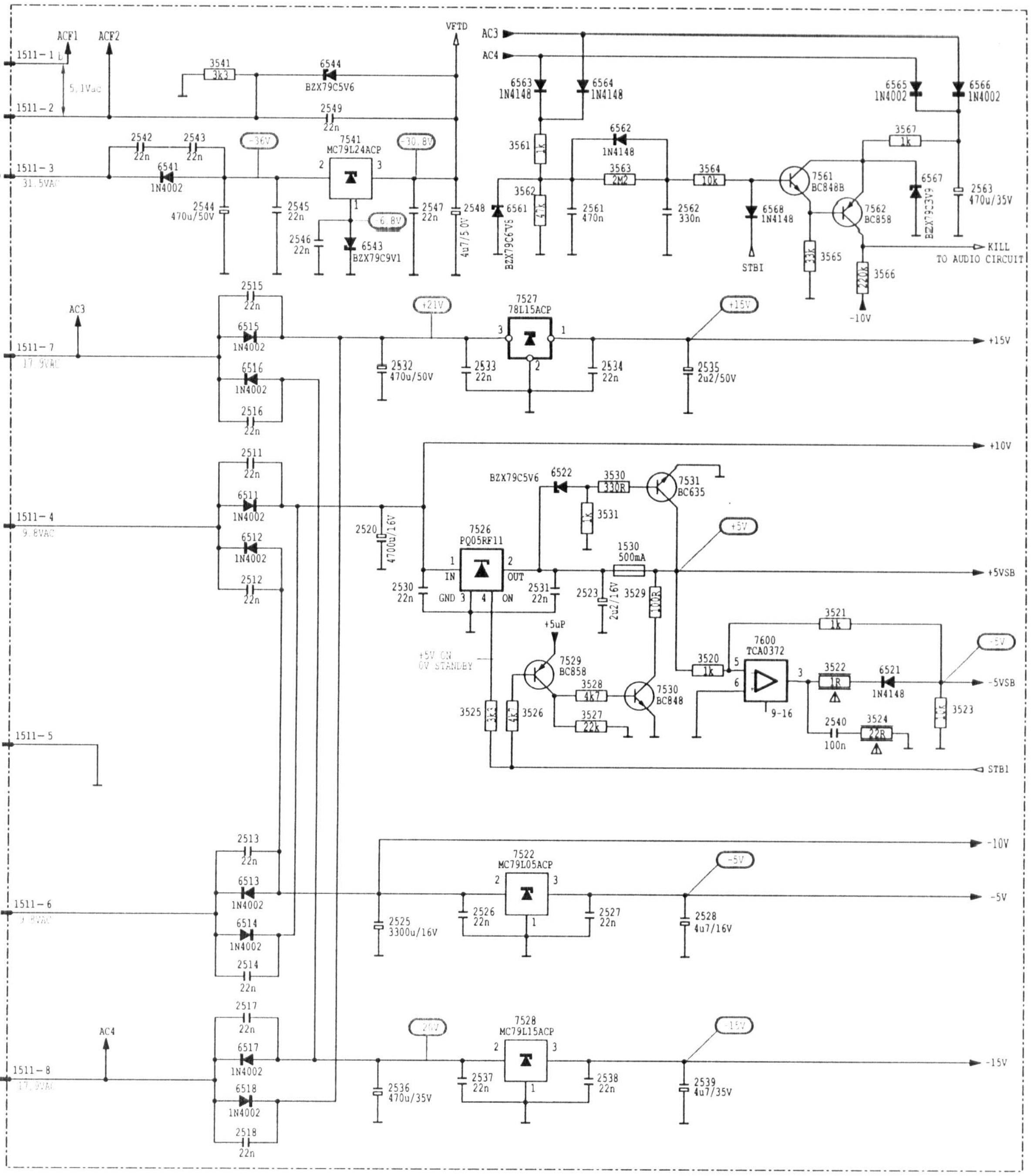
BLOCK DIAGRAM


CDM
SERVO & DECODING CIRCUIT
CD MECHANISM CDM9
DISC
TURNTABLE MOTOR
FOCUS MOTOR
RADIAL MOTOR
LASER DIODE
MONITOR DIODE
S(HF) D1-4
PHOTO DIODES 4x
HF in D1-4
LO
LM
TDA8808 PHOTO DIODE SIGNAL PROCESSOR
HF
FOCUS DRIVE
FE FElag
RADIAL DRIVE
RADout
RE1 RE2
TL
FAST ACCESS 74HC00
TDA8809 RADIAL ERROR PROCESSOR
RE-dig
DIV4
B0+3
RElag
REin
CORR
TTMO
DIV4 RE-dig TL SI/RD DODS
B0+3
SBD
TCMP
Vc
TURNTABLE MOTOR CONTROL
MC
MN 4264-15 DRAM
LOOPFILTER CURRENT SOURCE CHARGE PUMP
IREF
PD-OC
SAA7310 DECODER A
A0-A7
DA1-DA4
SDAB
SCAB
EFAB
XIN
CLAB
WSAB
DAAB
QRA QDA QCL SWAB
CRI
MC
MUTE
DODS/CRI
SI/RD
QRA QDA QCL SWAB/SSM
MUTE
ATSB
DOEN
MC68HC05C8 SERVOμP
RESET
SIN1
TRMOT
RSOUT RSIN
4MHz
RESET
MOTOR DRIVE
OPTICAL OUT
DIGITAL OUT
&
DOBM DOEN
SDAB
SCAB
EFAB
PCF3523P
XIN
CLAB DAAB WSAB ATSB
WSAB
CLAB
DAAB
I²S
LRCI
BCKI
DIN
SM8540A
BCKO WCKO DOL DOR
MDT MCK MLE
CKO
XTI
11.2896MHz
SAA7350
SCKI WSI SDI1 SDI2
XSYS1
DIGITAL MUTE
DOL
DOR
XSYS2
TDA1547
DOL
DOR
CLK
LM833
LM833
KILL LEFT
KILL RIGHT
MUTE LEFT
MUTE RIGHT
TO LINE OUT LEFT
TO LINE OUT RIGHT
AC3
AC4
τ
KILL LEFT
KILL RIGHT
POWER SUPPLY
MAINS SWITCH
SUPPLY
AC3
AC4
VFTD
ACF1
ACF2
+15V
+10V
+5VSB
-5VSB
STB1
-10V
-5V
-15V
STBI
4MHz
ESI
IN
OUT
MC68H05D9 USERμP
RESET
SK2
ESI
RC5
+5V
X24C16P EEPROM
CONTROL AND DISPLAY CIRCUIT
17 x
47C670N μP DRIVER
DISPLAY
IR
6MHz
LOADING ASSY
MOTOR LOADING
TRAY DETECTION SWITCH
VARIABLE HEADPHONE
KILL LEFT
KILL RIGHT
TO HEADPHONE LEFT
TO HEADPHONE RIGHT
HAS1034
9213

WIRING DIAGRAM

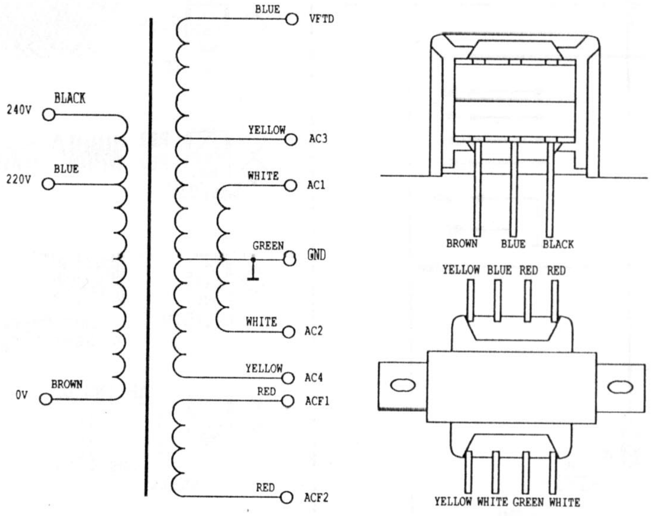

A
1 = LHP
2 = GND
3 = GND
4 = RHP
5 = −15V
6 = +15V
7 = KILL
1302
1
7
F4
1 = ACF1 (red)
2 = ACF2 (red)
3 = VFTD (blue)
4 = AC1 (white)
5 = GND (green)
6 = AC2 (white)
7 = AC3 (yellow)
8 = AC4 (yellow)
1511
8
1
E5
TRAY MOTOR
1 = TRAY
2 = GND
1601
2
1
1 = GND
2 = S
3 = D4
4 = D3
5 = D1
6 = D2
7 = GND
8 = LM
9 = LO
10 = GND
11 = FOC−
12 = FOC+
13 = RAD+
14 = RAD−
CDM MOTOR
1101
1 = VC
2 = GND
2
1
TRAY SWITCH
brown
black
1701
1 = SIN1
2 = GND
2
1
1 = +5V
2 = STB2
3 = DATA IN
4 = DATA OUT
5 = ACK
6 = CLK
7 = SDIS
8 = DISRES
9 = IR
10 = GND
11 = VFTD
12 = ACF1
13 = ACF2
14 = LED
15 = GND
SERVO DECODER AUDIO
1001
1
14
1702
15
1
Flex CDM
B3
B
A3
DISPLAY
1 = N.C.
2 = KEYBOARD 2
3 = KEYBOARD 2
4 = KEYBOARD 2
5 = KEYBOARD 2
1405
5
1
1 = GND
2 = LED
3 = ACF2
4 = ACF1
5 = VFTD
6 = GND
7 = IR
8 = DISRES
9 = SDIS
10 = CLK
11 = ACK
12 = DATA OUT
13 = DATA IN
14 = N.C.
15 = +5V
1
15
1403
1404
7
1
1 = +5V
2 = LED
3 = KEYBOARD 1
4 = KEYBOARD 1
5 = KEYBOARD 1
6 = KEYBOARD 1
7 = KEYBOARD 1
C2
C1
C
B1
B2
KEYBOARD
1
5
1407
1 = KEYBOARD 2
2 = KEYBOARD 2
3 = KEYBOARD 2
4 = KEYBOARD 2
5 = N.C.
1
7
1406
1 = KEYBOARD 1
2 = KEYBOARD 1
3 = KEYBOARD 1
4 = KEYBOARD 1
5 = KEYBOARD 1
6 = LED
7 = +5V
D
E1
MAINS INLET
MAINS
brown
blue
brown
blue
black
1
2
5
3
1
1504
1 = N
2 = AC
1505
1 = 240V
3 = 220V
5 = N
SK1
E
TRANSFORMER
A5
D1
F
HEADPHONE
1 = KILL
2 = +15V
3 = −15V
4 = RHP
5 = GND
6 = GND
7 = LHP
1310
7
1
1312
2
1
TO BE CONNECTED TO BOTTOM PLATE
A4
HAS1035
9212

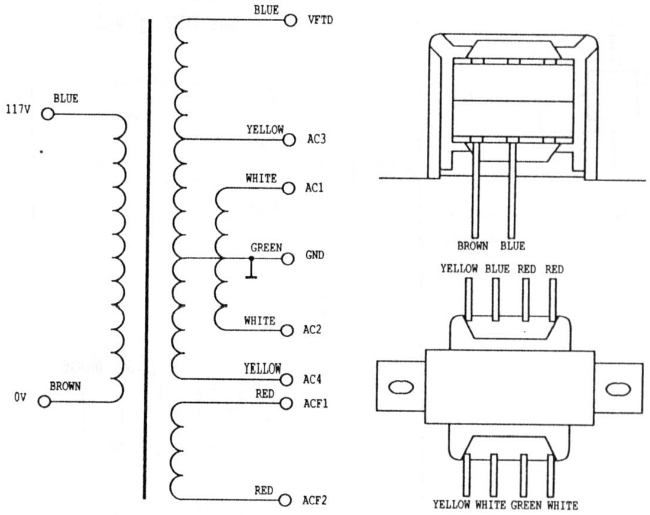
POWER SUPPLY


ACF1
ACF2
1511-1
1511-2
5,1Vac
VFTD
1511-3
31,5VAC
3541
3k3
6544
BZX79C5V6
2549
22n
2542
22n
2543
22n
6541
1N4002
-36V
7541
MC79L24ACP
-30,8V
2544
470u/50V
2545
22n
2546
22n
6543
BZX79C9V1
-6,8V
2547
22n
2548
4u7/5,0V
VFTD
AC3
AC4
6563
1N4148
6564
1N4148
3561
1k
3562
47k
6561
BZX79C6V8
6562
1N4148
3563
2M2
2561
470n
2562
330n
3564
10k
6568
1N4148
STBI
7561
BC848B
7562
BC858
3565
33k
3566
220k
-10V
3567
1k
6567
BZX79C3V9
6565
1N4002
6566
1N4002
2563
470u/35V
KILL
TO AUDIO CIRCUIT
AC3
1511-7
17,9VAC
2515
22n
6515
1N4002
6516
1N4002
2516
22n
+21V
2532
470u/50V
7527
78L15ACP
2533
22n
2534
22n
+15V
2535
2u2/50V
+15V
+10V
AC1
1511-4
9,8VAC
2511
22n
6511
1N4002
6512
1N4002
2512
22n
2520
4700u/16V
7526
PQ05RF11
IN
OUT
GND
ON
2530
22n
2531
22n
BZX79C5V6
6522
3530
330R
3531
1k
7531
BC635
1530
500mA
2523
2u2/16V
3529
100R
+5V
+5VSB
+5uP
+5V ON
0V STANDBY
7529
BC858
3528
4k7
3527
22k
7530
BC848
3525
3k3
3526
4k7
3521
1k
3520
1k
7600
TCA0372
9-16
3522
1R
6521
1N4148
2540
100n
3524
22R
3523
10k
-5V
-5VSB
STB1
GND
1511-5
-10V
AC2
1511-6
9,8VAC
2513
22n
6513
1N4002
6514
1N4002
2514
22n
2525
3300u/16V
7522
MC79L05ACP
2526
22n
2527
22n
-5V
2528
4u7/16V
-5V
AC4
1511-8
17,9VAC
2517
22n
6517
1N4002
6518
1N4002
2518
22n
-24V
2536
470u/35V
7528
MC79L15ACP
2537
22n
2538
22n
-15V
2539
4u7/35V
-15V

3104 118 00641S A
9212

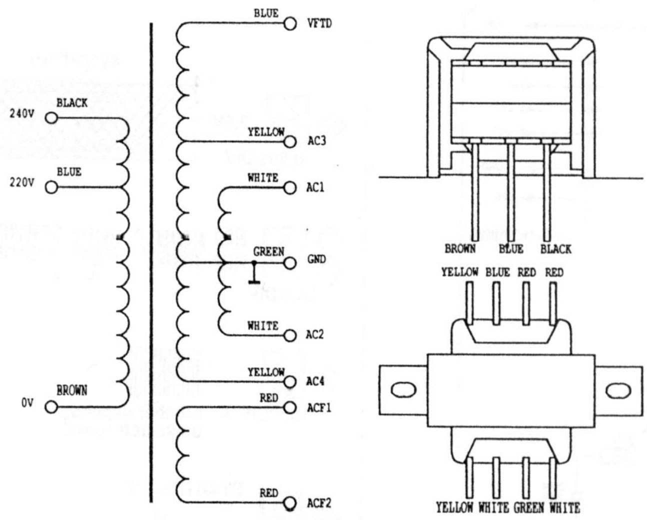
TRANSFORMER CONNECTIONS

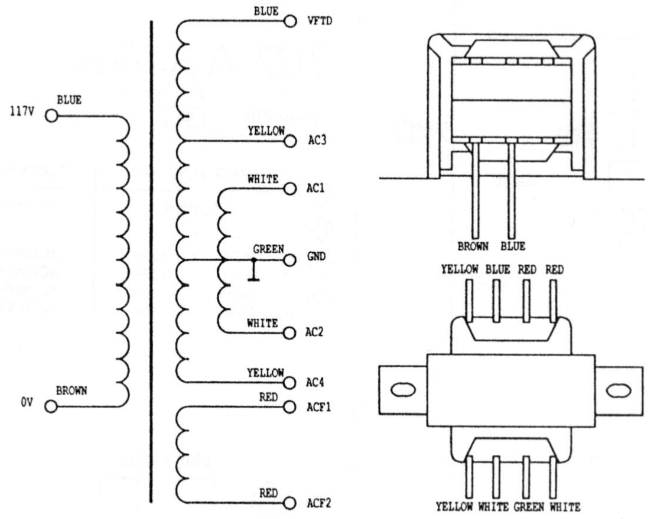

BLUE
VFTD
240V
BLACK
YELLOW
AC3
220V
BLUE
WHITE
AC1
GREEN
GND
WHITE
AC2
YELLOW
AC4
0V
BROWN
RED
ACF1
RED
ACF2
BROWN
BLUE
BLACK
YELLOW
BLUE
RED
RED
YELLOW
WHITE
GREEN
WHITE


BLUE
VFTD
117V
BLUE
YELLOW
AC3
WHITE
AC1
GREEN
GND
WHITE
AC2
YELLOW
AC4
0V
BROWN
RED
ACF1
RED
ACF2
BROWN
BLUE
YELLOW
BLUE
RED
RED
YELLOW
WHITE
GREEN
WHITE

HAS1040
9212

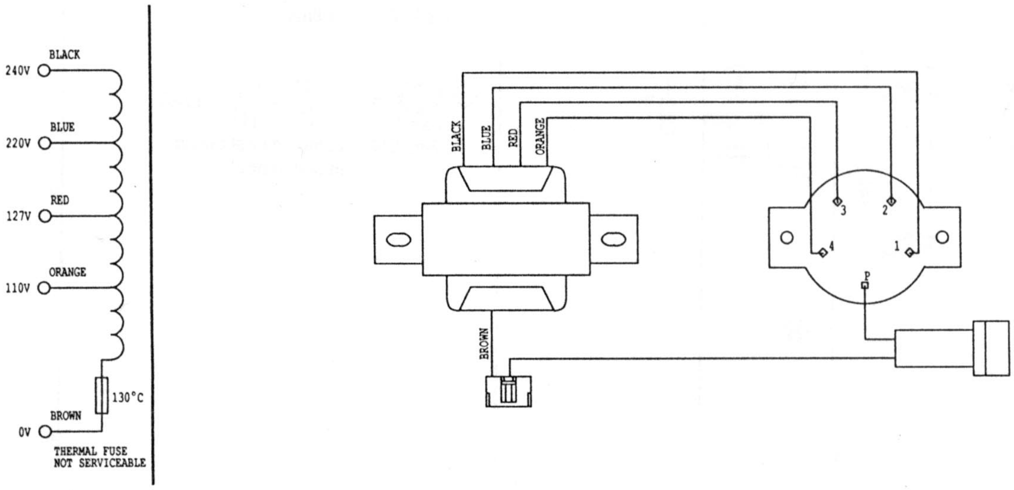
TRANSFORMER CONNECTIONS


BLUE
VFTD
240V
BLACK
220V
BLUE
YELLOW
AC3
WHITE
AC1
GREEN
GND
WHITE
AC2
YELLOW
AC4
0V
BROWN
RED
ACF1
RED
ACF2
BROWN BLUE BLACK
YELLOW BLUE RED RED
YELLOW WHITE GREEN WHITE


BLUE
VFTD
117V
BLUE
YELLOW
AC3
WHITE
AC1
GREEN
GND
WHITE
AC2
YELLOW
AC4
0V
BROWN
RED
ACF1
RED
ACF2
BROWN BLUE
YELLOW BLUE RED RED
YELLOW WHITE GREEN WHITE

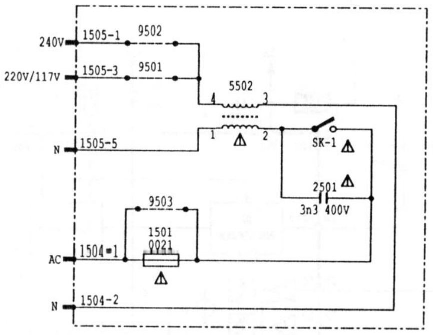
HAS1040
9212

VOLTAGE SELECTOR


240V
BLACK
220V
BLUE
127V
RED
110V
ORANGE
130°C
0V
BROWN
THERMAL FUSE
NOT SERVICEABLE
BLACK
BLUE
RED
ORANGE
3
2
4
1
P
BROWN

HAS1055
9234

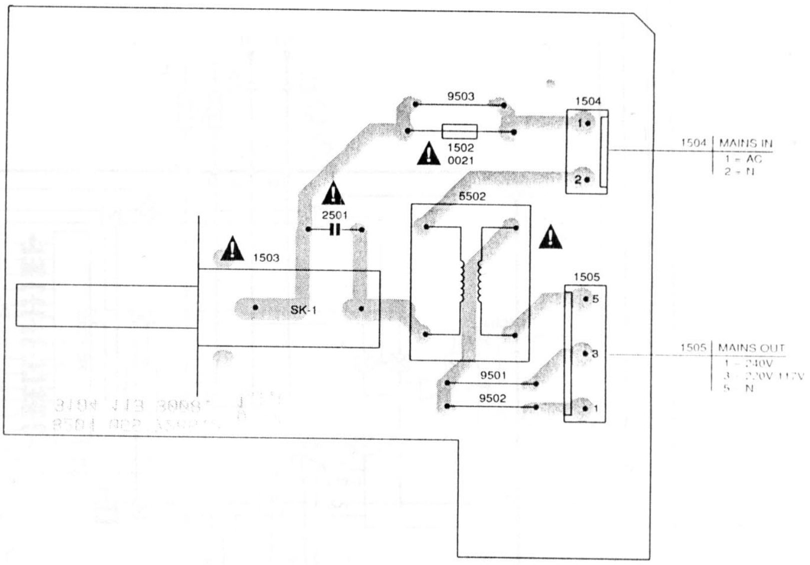
MAINS SWITCH DIAGRAM


240V
220V/117V
N
AC
N
1505-1
1505-3
1505-5
1504=1
1504-2
9502
9501
9503
5502
4
3
1
2
SK-1
2501
3n3 400V
1501
0021

CD950/	00S	01S	05S	10S	17S
0021	X		X	X	X
1501	125mA	var.	125mA	125mA	200mA
9501	X	X			X
9502			X	X	
9503		X			

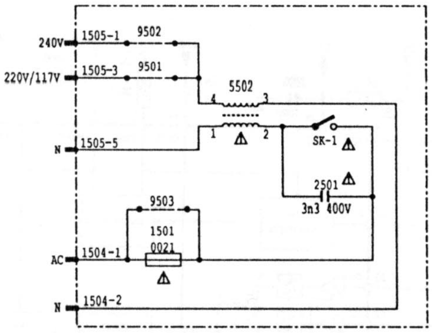
3104 118 00641S-E
9212

MAINS SWITCH PANEL


9503
1504
1502
0021
2501
5502
1503
SK-1
1505
9501
9502
1
2
5
3
1
1504 MAINS IN
1 = AC
2 = N
1505 MAINS OUT
1 = 240V
3 = 220V 117V
5 = N

3104 113 3008 B-COMP
9211

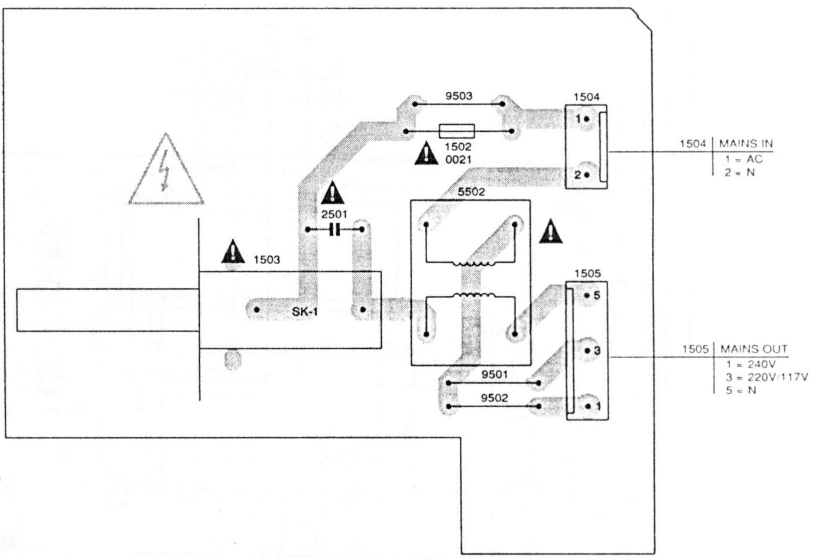
MAINS SWITCH DIAGRAM


240V
1505-1
9502
220V/117V
1505-3
9501
5502
4
3
1
2
SK-1
N
1505-5
2501
3n3 400V
9503
1501
0021
AC
1504-1
N
1504-2

CD950/	00S	01S	05S	10S	17S
0021	X		X	X	X
1501	125mA	var.	125mA	125mA	200mA
9501	X	X			X
9502			X	X	
9503		X			

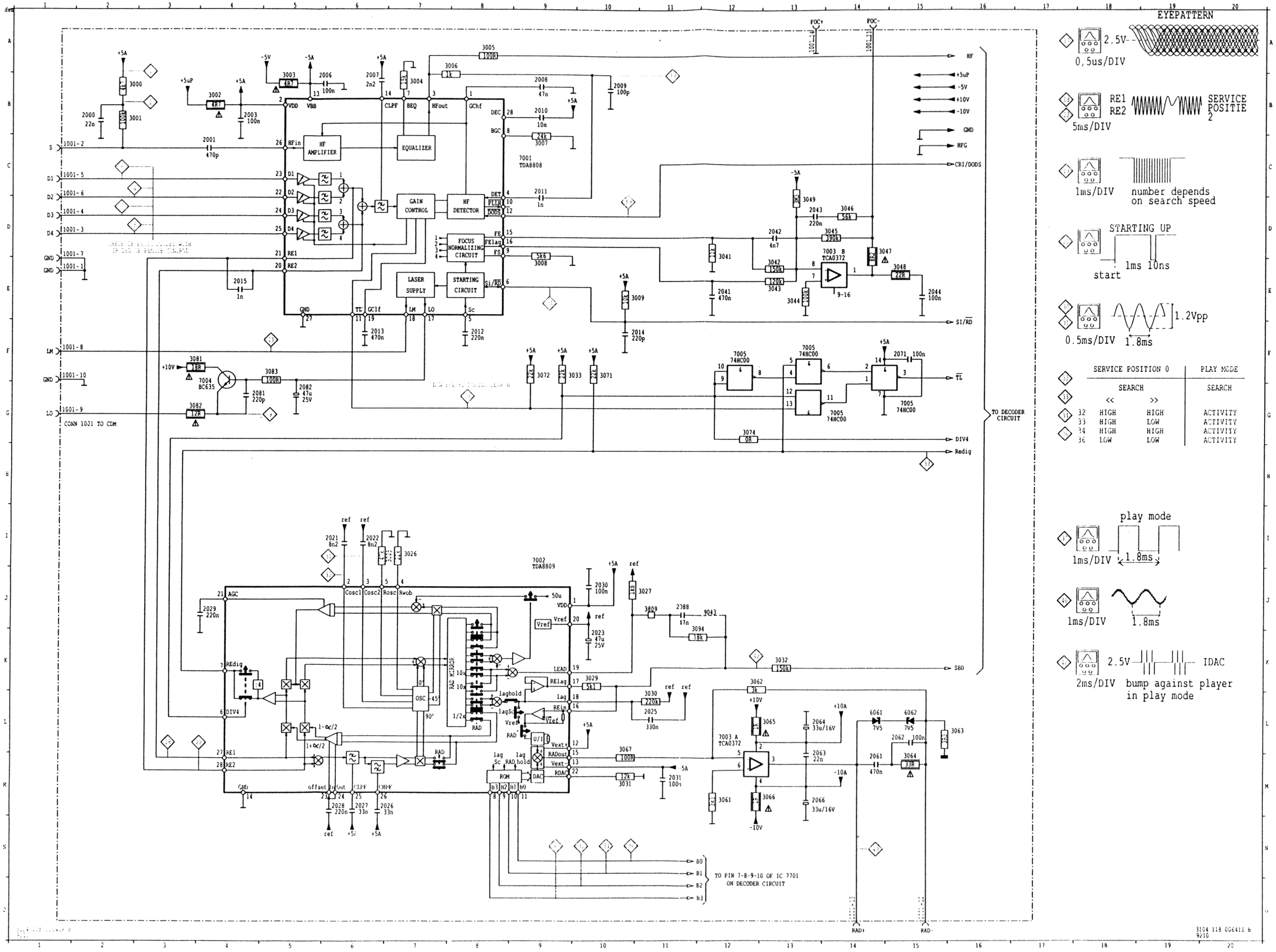
3104 118 00641S-E
9212

MAINS SWITCH PANEL


9503
1504
1502
0021
5502
2501
1503
SK-1
1505
9501
9502
1•
2•
•5
•3
•1
1504 | MAINS IN
1 = AC
2 = N
1505 | MAINS OUT
1 = 240V
3 = 220V/117V
5 = N

3104 113 3008 B-COMP
9219

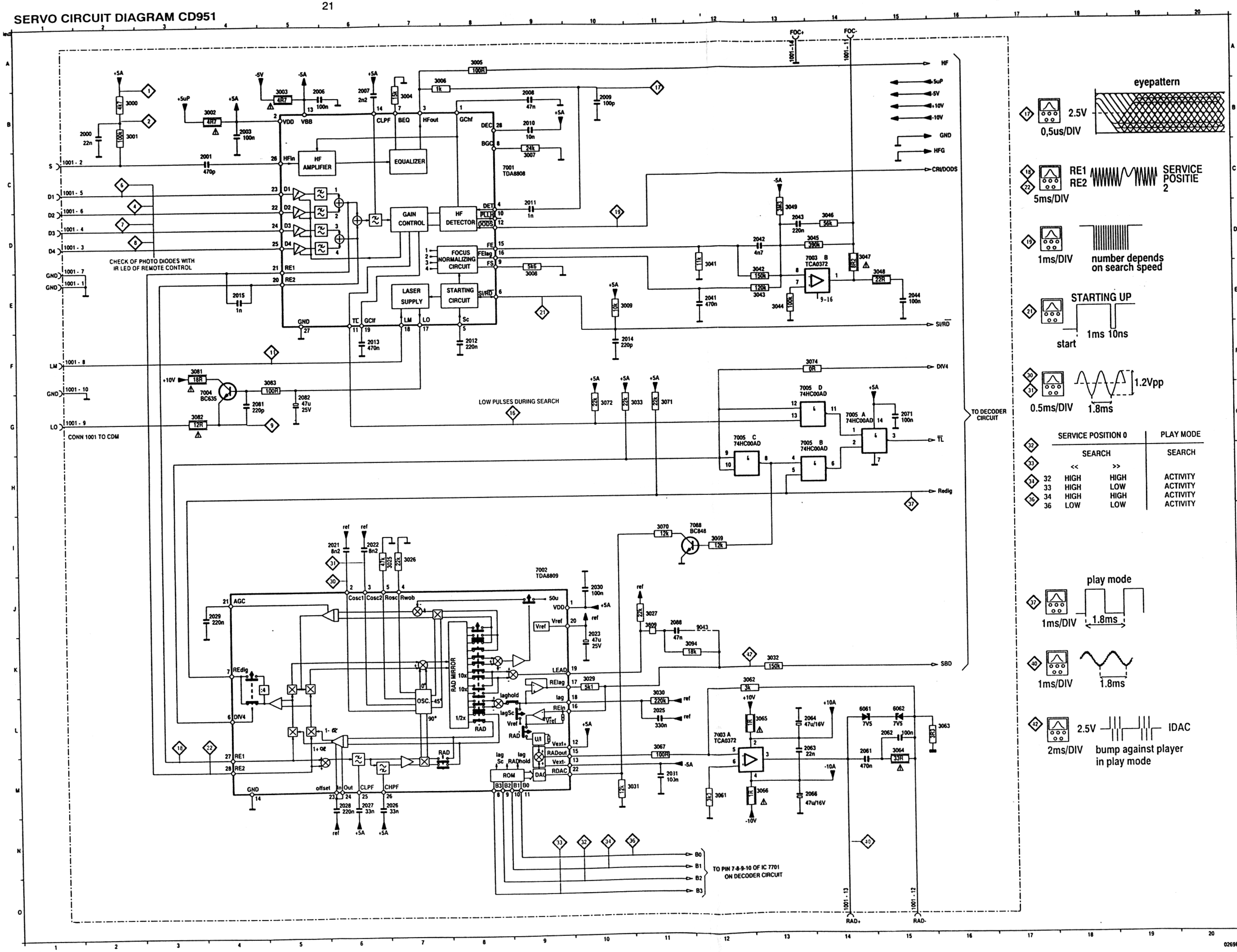
SERVO CIRCUIT DIAGRAM


HF AMPLIFIER
EQUALIZER
GAIN CONTROL
HF DETECTOR
FOCUS NORMALIZING CIRCUIT
LASER SUPPLY
STARTING CIRCUIT
7001 TDA8808
7002 TDA8809
7003 A TCA0372
7003 B TCA0372
7004 BC635
7005 74HC00
CONN 1001 TO CDM
HF
CRI/DODS
SI/RD
TL
DIV4
Redig
SBD
TO DECODER CIRCUIT
B0
B1
B2
B3
TO PIN 7-8-9-10 OF IC 7701 ON DECODER CIRCUIT
FOC+
FOC-
RAD+
RAD-
EYEPATTERN
2.5V
0,5us/DIV
RE1
RE2
SERVICE POSITIE 2
5ms/DIV
1ms/DIV
number depends on search speed
STARTING UP
1ms 10ns
start
1.2Vpp
0.5ms/DIV
1.8ms
play mode
1ms/DIV
1.8ms
1ms/DIV
1.8ms
2.5V
IDAC
2ms/DIV
bump against player in play mode
3104 113 00641S 6 9/10

	SERVICE POSITION 0		PLAY MODE
	SEARCH		SEARCH
	<<	>>	
32	HIGH	HIGH	ACTIVITY
33	HIGH	LOW	ACTIVITY
34	HIGH	HIGH	ACTIVITY
36	LOW	LOW	ACTIVITY

1001	O15
1001	A14
1001	O14
1001	A13
1001	D 1
1001	D 1
1001	D 1
1001	C 1
1001	C 1
1001	C 1
1001	G 1
1001	F 1
1001	F 1
1001	E 1
2000	B 2
2001	C 4
2003	B 4
2006	B 5
2007	B 6
2008	B 9
2009	B10
2010	B 9
2011	C 9
2012	F 8
2013	F 6
2014	F11
2015	E 4
2021	I 6
2022	I 6
2023	K10
2025	L11
2026	M 6
2027	M 6
2028	M 6
2029	J 4
2030	J10
2031	M11
2041	E12
2042	D13
2043	D13
2044	E15
2061	M14
2062	L15
2063	M14
2064	L13
2066	M13
2071	F15
2081	G 4
2082	G 5
2088	J11
3000	B 2
3001	B 2
3002	B 4
3003	B 5
3004	B 7
3005	A 8
3006	A 7
3007	C 9
3008	E 9
3009	E10
3025	I 7
3026	I 7
3027	J11
3029	K10
3030	L11
3031	M10
3032	K13
3033	F 9
3041	E12
3042	E13
3043	E13
3044	E13
3045	D13
3046	D14
3047	D14
3048	E15
3049	D13
3061	M12
3062	K12
3063	L16
3064	M15
3065	L13
3066	M13
3067	L10
3071	F10
3072	F 9
3074	G12
3081	F 3
3082	G 3
3083	F 5
3094	K11
3809	J11
6061	L14
6062	L15
7001	C 9
7002	I 9
7003	D13
7004	G 3
7005	G15
7005	G14
7005	F14
7005	F12
9043	J12

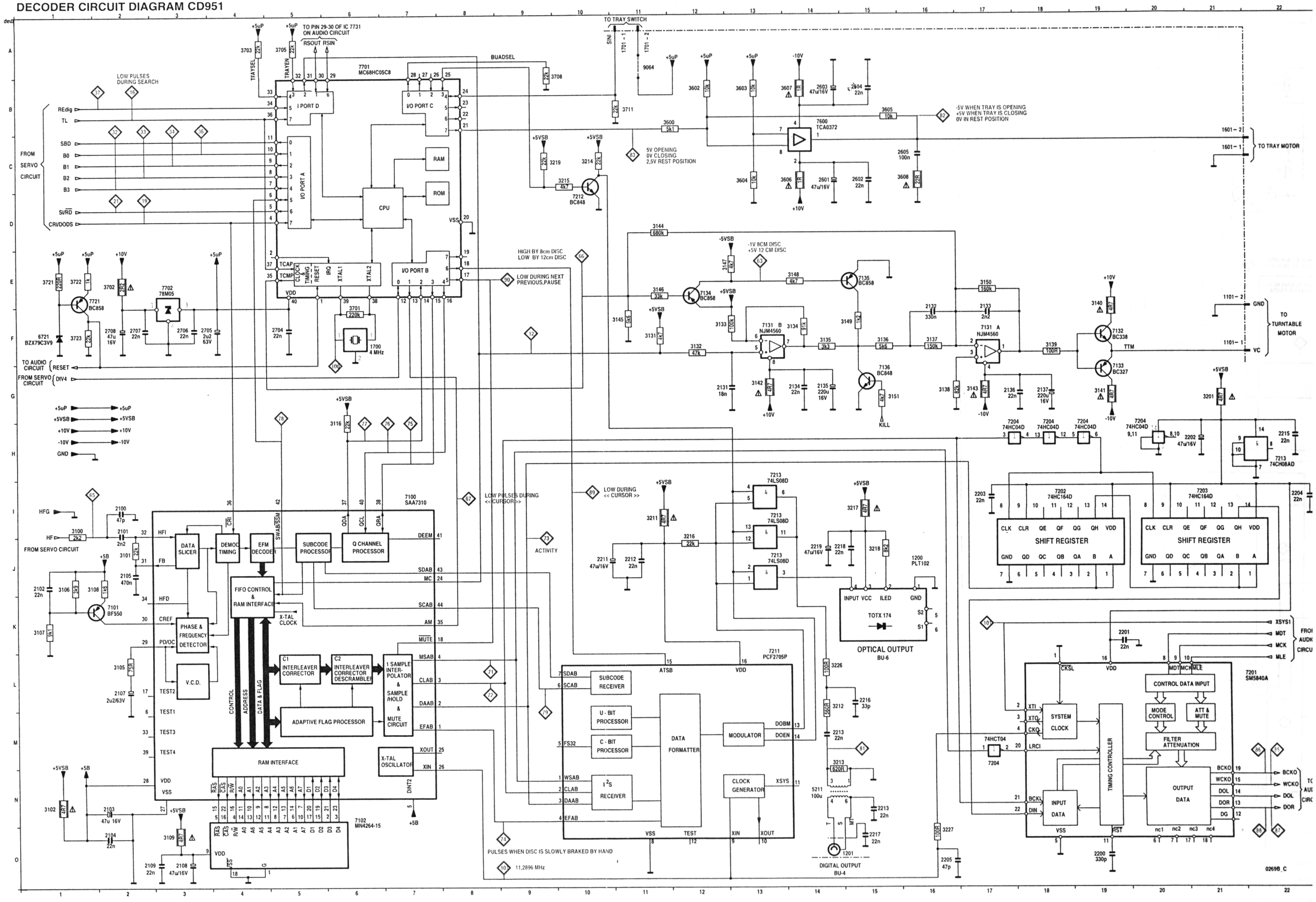
SERVO CIRCUIT DIAGRAM CD951


7001 TDA8808
7002 TDA8809
7003 A TCA0372
7003 B TCA0372
7004 BC635
7005 A 74HC00AD
7005 B 74HC00AD
7005 C 74HC00AD
7005 D 74HC00AD
7088 BC848
HF AMPLIFIER
EQUALIZER
GAIN CONTROL
HF DETECTOR
FOCUS NORMALIZING CIRCUIT
LASER SUPPLY
STARTING CIRCUIT
RAD MIRROR
OSC.
ROM
DAC
CHECK OF PHOTO DIODES WITH IR LED OF REMOTE CONTROL
CONN 1001 TO CDM
LOW PULSES DURING SEARCH
TO DECODER CIRCUIT
TO PIN 7-8-9-10 OF IC 7701 ON DECODER CIRCUIT
HF
CRI/DODS
SI/RD
DIV4
TL
Redig
SBD
B0
B1
B2
B3
FOC+
FOC-
RAD+
RAD-
S
D1
D2
D3
D4
GND
LM
LO
+5uP
-5V
+10V
-10V
HFG
eyepattern
2.5V
0,5us/DIV
RE1
RE2
SERVICE POSITIE 2
5ms/DIV
1ms/DIV
number depends on search speed
STARTING UP
start
1ms 10ns
1.2Vpp
0.5ms/DIV
1.8ms
play mode
1ms/DIV
1.8ms
1ms/DIV
1.8ms
2.5V
IDAC
2ms/DIV
bump against player in play mode
0269B_B

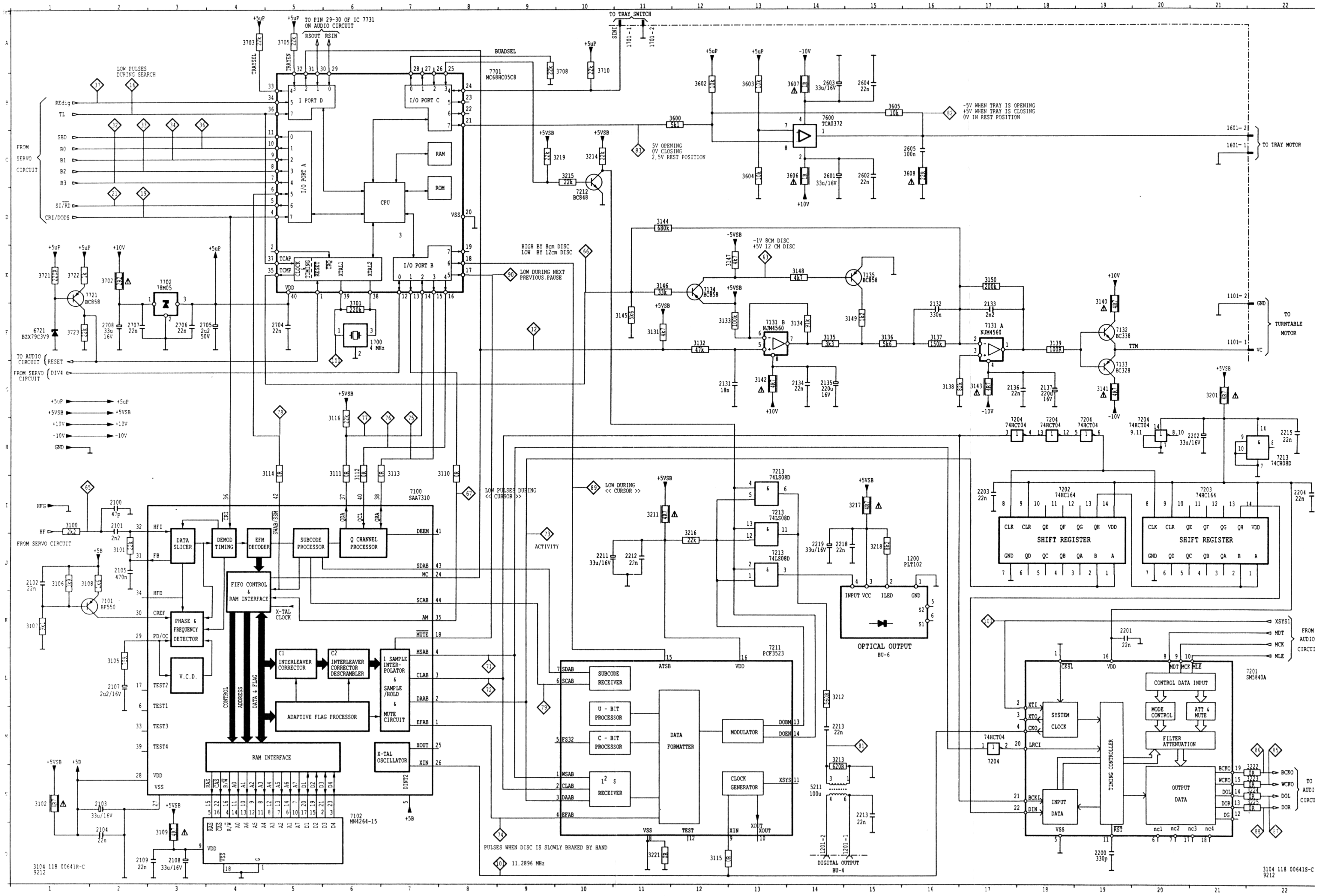
	SERVICE POSITION 0		PLAY MODE
	SEARCH		SEARCH
	<<	>>	
32	HIGH	HIGH	ACTIVITY
33	HIGH	LOW	ACTIVITY
34	HIGH	HIGH	ACTIVITY
36	LOW	LOW	ACTIVITY

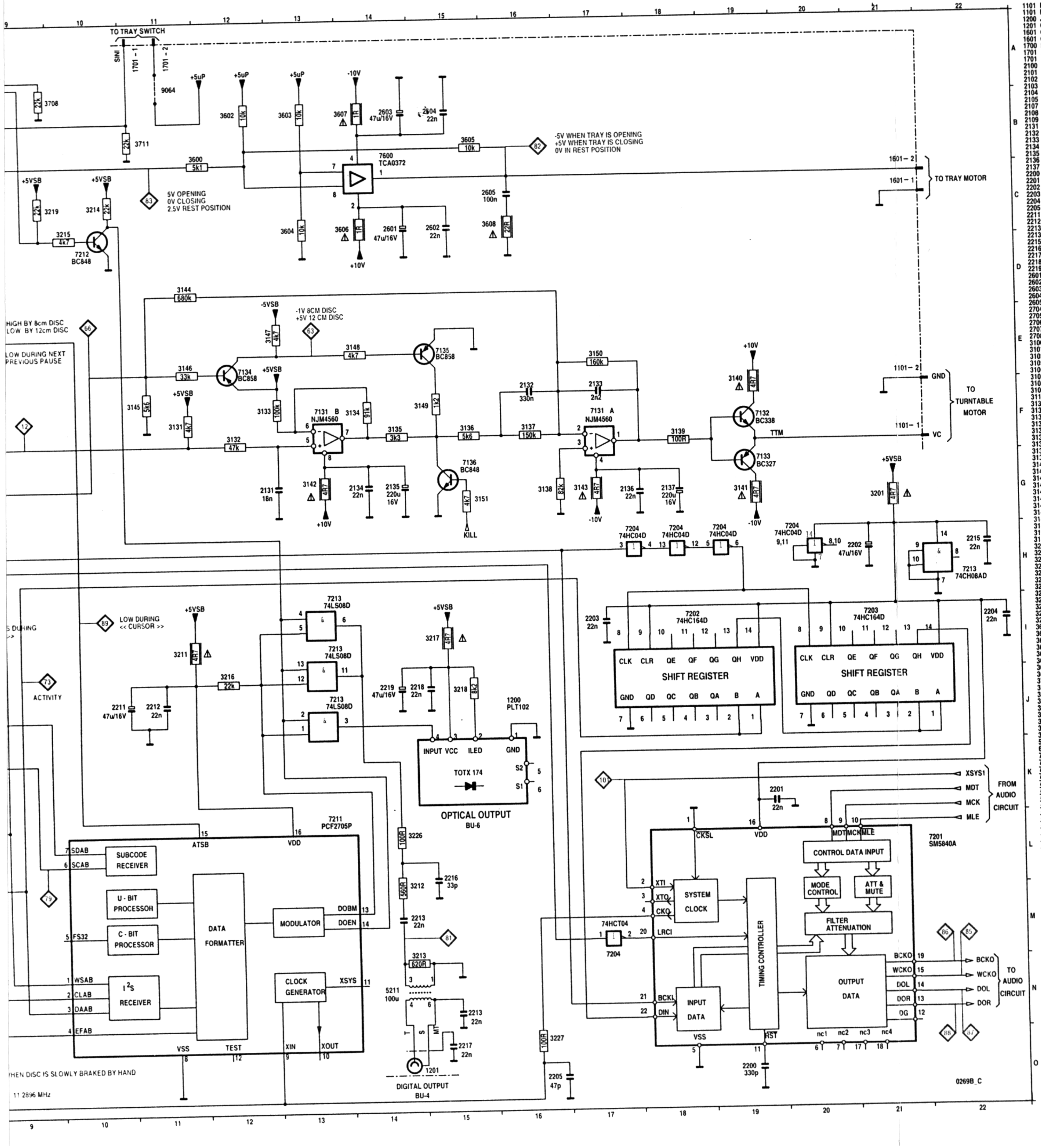
1001	O15
1001	A14
1001	O14
1001	A13
1001	D 1
1001	D 1
1001	D 1
1001	C 1
1001	C 1
1001	C 1
1001	G 1
1001	F 1
1001	F 1
1001	E 1
2000	B 2
2001	C 4
2003	B 4
2006	B 5
2007	B 6
2008	B 9
2009	B10
2010	B 9
2011	C 9
2012	F 8
2013	F 6
2014	F11
2015	E 4
2021	I 6
2022	I 6
2023	K10
2025	L11
2026	M 6
2027	M 6
2028	M 6
2029	J 4
2030	J10
2031	M11
2041	E12
2042	D13
2043	D13
2044	E15
2061	M14
2062	L15
2063	M14
2064	L13
2066	M13
2071	G15
2081	G 4
2082	G 5
2088	J11
3000	B 2
3001	B 2
3002	B 4
3003	B 5
3004	B 7
3005	A 8
3006	A 7
3007	C 9
3008	E 9
3009	E10
3025	I 7
3026	I 7
3027	J11
3029	K10
3030	L11
3031	M10
3032	K13
3033	G11
3041	E12
3042	E13
3043	E13
3044	E13
3045	D13
3046	D14
3047	D14
3048	E15
3049	D13
3061	M12
3062	K12
3063	L16
3064	M15
3065	L13
3066	M13
3067	L11
3069	I12
3070	I11
3071	G11
3072	G10
3074	F13
3081	F 3
3082	G 3
3083	F 5
3094	K11
3809	J11
6061	L14
6062	L15
7001	C 9
7002	I 9
7003	D13
7004	G 3
7005	G14
7005	G13
7005	G13
7005	G12
7088	I11
9043	K12

DECODER CIRCUIT DIAGRAM CD951

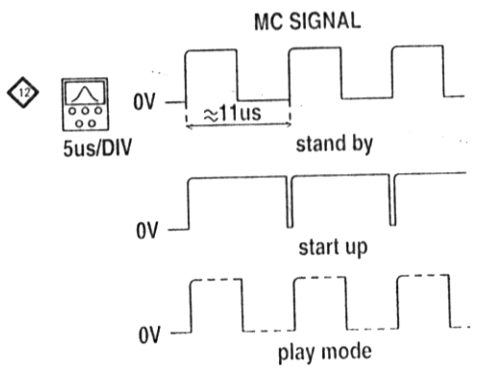

TO TRAY SWITCH
1701
9064
7701 MC68HC05C8
I PORT D
I/O PORT C
I/O PORT A
I/O PORT B
CPU
RAM
ROM
TCAP
TCMP
CLOCK TIMING
RESET
IRQ
XTAL1
XTAL2
VDD
VSS
BUADSEL
TO PIN 29-30 OF IC 7731 ON AUDIO CIRCUIT
RSOUT RSIN
TFAYSEL
TRAYEN
LOW PULSES DURING SEARCH
REdig
TL
SBD
B0
B1
B2
B3
SI/RD
CRI/DODS
FROM SERVO CIRCUIT
7702 78M05
7721 BC858
6721 BZX79C3V9
1700 4 MHz
TO AUDIO CIRCUIT RESET
FROM SERVO CIRCUIT DIV4
+5uP
+5VSB
+10V
-10V
GND
HIGH BY 8cm DISC
LOW BY 12cm DISC
LOW DURING NEXT PREVIOUS,PAUSE
7212 BC848
5V OPENING
0V CLOSING
2,5V REST POSITION
7600 TCA0372
-5V WHEN TRAY IS OPENING
+5V WHEN TRAY IS CLOSING
0V IN REST POSITION
1601-2
1601-1
TO TRAY MOTOR
-1V 8CM DISC
+5V 12 CM DISC
7134 BC858
7135 BC858
7131 B NJM4560
7131 A NJM4560
7136 BC848
KILL
7132 BC338
7133 BC327
TTM
1101-2
1101-1
GND
VC
TO TURNTABLE MOTOR
7204 74HC04D
7213 74HC08AD
7202 74HC164D
7203 74HC164D
SHIFT REGISTER
CLK CLR QE QF QG QH VDD
GND QD QC QB QA B A
HFG
HF
FROM SERVO CIRCUIT
7101 BF550
7100 SAA7310
DATA SLICER
DEMOD TIMING
EFM DECODER
SUBCODE PROCESSOR
Q CHANNEL PROCESSOR
FIFO CONTROL & RAM INTERFACE
X-TAL CLOCK
PHASE & FREQUENCY DETECTOR
V.C.O.
C1 INTERLEAVER CORRECTOR
C2 INTERLEAVER CORRECTOR DESCRAMBLER
1 SAMPLE INTERPOLATOR & SAMPLE /HOLD & MUTE CIRCUIT
ADAPTIVE FLAG PROCESSOR
RAM INTERFACE
X-TAL OSCILLATOR
CONTROL
ADDRESS
DATA & FLAG
HFI FB HFD CREF PD/OC TEST2 TEST1 TEST3 TEST4 VDD VSS
DEEM SDAB MC SCAB AM MUTE MSAB CLAB DAAB EFAB XOUT XIN DINT2
7102 MN4264-15
LOW PULSES DURING << CURSOR >>
LOW DURING << CURSOR >>
ACTIVITY
7211 PCF2705P
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
I²S RECEIVER
DATA FORMATTER
MODULATOR
CLOCK GENERATOR
SDAB SCAB FS32 WSAB CLAB DAAB EFAB
ATSB VDD DOBM DOEN XSYS VSS TEST XIN XOUT
7213 74LS08D
1200 PLT102
INPUT VCC ILED GND
TOTX 174
OPTICAL OUTPUT BU-6
5211 100u
1201
DIGITAL OUTPUT BU-4
PULSES WHEN DISC IS SLOWLY BRAKED BY HAND
11,2896 MHz
7201 SM5840A
XSYS1 MDT MCK MLE
FROM AUDIO CIRCUIT
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
SYSTEM CLOCK
TIMING CONTROLLER
FILTER ATTENUATION
INPUT DATA
OUTPUT DATA
74HCT04 7204
CKSL VDD XTI XTO CKO LRCI BCKI DIN VSS RST
BCKO WCKO DOL DOR DG
TO AUDIO CIRCUIT
0269B_C

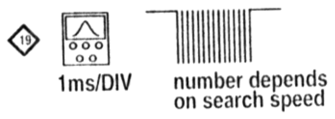
DECODER CIRCUIT DIAGRAM

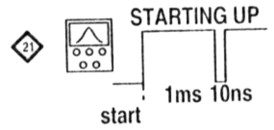

TO PIN 29-30 OF IC 7731 ON AUDIO CIRCUIT
RSOUT RSIN
TO TRAY SWITCH
SIN1
1701-1
1701-2
BUADSEL
7701 MC68HC05C8
I PORT D
I/O PORT C
I/O PORT A
I/O PORT B
RAM
ROM
CPU
TCAP
TCMP
CLOCK TIMING RESET
IRQ
XTAL1
XTAL2
VDD
VSS
LOW PULSES DURING SEARCH
REdig
TL
SBD
B0
B1
B2
B3
SI/RD
CRI/DODS
FROM SERVO CIRCUIT
TRAYSEL
TRAYEN
3703 22k
3705 22k
3708 22k
3710 22k
3219 22k
3214 22k
3215 22k
7212 BC848
5V OPENING 0V CLOSING 2,5V REST POSITION
3600 5k1
3602 10k
3603 10k
3604 10k
3605 10k
3606 1R
3607 1R
3608 22R
2603 33u/16V
2604 22n
2601 33u/16V
2602 22n
2605 100n
7600 TCA0372
-5V WHEN TRAY IS OPENING +5V WHEN TRAY IS CLOSING 0V IN REST POSITION
1601-2
1601-1
TO TRAY MOTOR
+5uP
+5VSB
-10V
+10V
-5VSB
3721 220R
3722 1k
3702 1R
3723 22k
7721 BC858
6721 BZX79C3V9
7702 78M05
2708 33u 16V
2707 22n
2706 22n
2705 2u2 50V
2704 22n
3701 220k
1700 4 MHz
TO AUDIO CIRCUIT RESET
FROM SERVO CIRCUIT DIV4
+5uP ► +5uP
+5VSB ► +5VSB
+10V ► +10V
-10V ► -10V
GND ►
HIGH BY 8cm DISC LOW BY 12cm DISC
LOW DURING NEXT PREVIOUS, PAUSE
3144 680k
3147 4k7
-1V 8CM DISC +5V 12 CM DISC
3148 4k7
7135 BC858
3146 33k
7134 BC858
3145 5k6
3133 100k
3131 4k7
3134 91k
7131 B NJM4560
3149 1k2
3132 47k
3135 3k3
3136 5k6
3137 150k
3150 200k
2132 330n
2133 2n2
7131 A NJM4560
3139 100R
3140 1R
7132 BC338
7133 BC328
3141 1R
TTM
1101-2 GND
1101-1 VC
TO TURNTABLE MOTOR
2131 18n
3142 1R
2134 22n
2135 220u 16V
3138 82k
3143 1R
2136 22n
2137 220u 16V
3201 1R
7204 74HCT04
7202 74HC164
7203 74HC164
2202 33u/16V
2215 22n
7213 74CH08D
2203 22n
2204 22n
CLK CLR QE QF QG QH VDD
SHIFT REGISTER
GND QD QC QB QA B A
3116 22k
3114 0R
3111 0R
3112 0R
3113 0R
3110 0R
HFG
HF
3100 2k2
2100 47p
2101 2n2
3101 15k
2105 470n
FROM SERVO CIRCUIT
2102 22n
3106 47k
3108 15k
7101 BF550
3107 1k
3105 47k
2107 2u2/16V
3102 1R
2103 33u/16V
2104 22n
3109 1R
2109 22n
2108 33u/16V
7100 SAA7310
HFI
FB
HFD
CREF
PD/OC
TEST2
TEST1
TEST3
TEST4
VDD
VSS
DATA SLICER
DEMOD TIMING
EFM DECODER
SUBCODE PROCESSOR
Q CHANNEL PROCESSOR
CRI
SWAB/SSM
QDA
QCL
QRA
DEEM
SDAB
MC
SCAB
AM
MUTE
MSAB
CLAB
DAAB
EFAB
XOUT
XIN
DINT2
FIFO CONTROL & RAM INTERFACE
X-TAL CLOCK
PHASE & FREQUENCY DETECTOR
V.C.D.
C1 INTERLEAVER CORRECTOR
C2 INTERLEAVER CORRECTOR DESCRAMBLER
1 SAMPLE INTERPOLATOR & SAMPLE /HOLD & MUTE CIRCUIT
ADAPTIVE FLAG PROCESSOR
CONTROL
ADDRESS
DATA & FLAG
RAM INTERFACE
X-TAL OSCILLATOR
RAS CAS R/W A0 A1 A2 A3 A4 A5 A6 A7 D1 D2 D3 D4
7102 MN4264-15
LOW PULSES DURING << CURSOR >>
LOW DURING << CURSOR >>
ACTIVITY
PULSES WHEN DISC IS SLOWLY BRAKED BY HAND
11,2896 MHz
3211 1R
2211 33u/16V
2212 22n
3216 22k
7213 74LS08D
3217 1R
2219 33u/16V
2218 22n
3218 39k
1200 PLT102
INPUT VCC ILED GND
S1 S2
OPTICAL OUTPUT
BU-6
7211 PCF3523
ATSB
VDD
SDAB
SCAB
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
FS32
WSAB
CLAB
DAAB
EFAB
I^2S RECEIVER
DATA FORMATTER
MODULATOR
DOBM
DOEN
CLOCK GENERATOR
XSYS
VSS
TEST
XIN
XOUT
3221 1R
3115 0R
3212 620R
2213 22n
3213 620R
5211 100u
2213 22n
1201-2
1201-1
DIGITAL OUTPUT
BU-4
XSYS
MDT
MCK
MLE
FROM AUDIO CIRCUIT
2201 22n
7201 SM5840A
CKSL
VDD
MDT MCK MLE
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
FILTER ATTENUATION
SYSTEM CLOCK
XTI
XTO
CKO
LRCI
BCKI
DIN
INPUT DATA
TIMING CONTROLLER
OUTPUT DATA
RST
VSS
nc1 nc2 nc3 nc4
BCKO
WCKO
DOL
DOR
DG
3222 0R
3223 0R
3224 0R
3225 0R
► BCKO
► WCKO
► DOL
► DOR
TO AUDIO CIRCUIT
2200 330p
3104 118 00641R-C 9212
3104 118 00641S-C 9212
A B C D E F G H I J K L M N O
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22


TO TRAY SWITCH
1701 - 1
1701 - 2
9064
3708
3711
3600 5k1
+5VSB
3219
3214
3215 4k7
7212 BC848
5V OPENING
0V CLOSING
2.5V REST POSITION
+5uP
3602 10k
3603 10k
-10V
3607 1R
2603 47u/16V
2604 22n
3605 10k
-5V WHEN TRAY IS OPENING
+5V WHEN TRAY IS CLOSING
0V IN REST POSITION
7600 TCA0372
2605 100n
3608 22R
3604 10k
3606 1R
2601 47u/16V
2602 22n
+10V
1601 - 2
1601 - 1
TO TRAY MOTOR
3144 680k
-5VSB
3147 4k7
-1V 8CM DISC
+5V 12 CM DISC
3148 4k7
7135 BC858
HIGH BY 8cm DISC
LOW BY 12cm DISC
LOW DURING NEXT
PREVIOUS PAUSE
3146 33k
7134 BC858
3145 56k
3131 4k7
3133 100k
7131 B NJM4560
3134 91k
3149 1k2
3150 160k
2132 330n
2133 2n2
7131 A NJM4560
3132 47k
3135 3k3
3136 5k6
3137 150k
3139 100R
3140 4R7
7132 BC338
TTM
7133 BC327
1101 - 2
1101 - 1
GND
VC
TO TURNTABLE MOTOR
2131 18n
3142 4R7
2134 22n
2135 220u 16V
7136 BC848
3151 4k7
KILL
3138 82k
3143 4R7
2136 22n
2137 220u 16V
3141 4R7
-10V
+5VSB
3201 4R7
7204 74HC04D
7204 74HC04D 9,11
2202 47u/16V
2215 22n
7213 74CH08AD
2203 22n
7202 74HC164D
7203 74HC164D
2204 22n
CLK CLR QE QF QG QH VDD
SHIFT REGISTER
GND QD QC QB QA B A
7213 74LS08D
LOW DURING << CURSOR >>
ACTIVITY
3211 4R7
3216 22k
2211 47u/16V
2212 22n
3217 4R7
2219 47u/16V
2218 22n
3218 8k2
1200 PLT102
INPUT VCC ILED GND
TOTX 174
OPTICAL OUTPUT BU-6
7211 PCF2705P
ATSB VDD
SDAB SCAB
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
DATA FORMATTER
MODULATOR
DOBM DOEN
FS32
WSAB CLAB DAAB EFAB
I²S RECEIVER
CLOCK GENERATOR
XSYS
VSS TEST XIN XOUT
3226 100R
3212 560R
2216 33p
2213 22n
3213 620R
5211 100u
2213 22n
2217 22n
1201
DIGITAL OUTPUT BU-4
3227 100R
2205 47p
2201 22n
XSYS1 MDT MCK MLE
FROM AUDIO CIRCUIT
7201 SM5840A
CKSL VDD MDT MCK MLE
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
FILTER ATTENUATION
XTI XTO CKO
SYSTEM CLOCK
LRCI
74HCT04 7204
TIMING CONTROLLER
BCKI DIN
INPUT DATA
OUTPUT DATA
BCKO WCKO DOL DOR OG
BCKO WCKO DOL DOR
TO AUDIO CIRCUIT
VSS IST nc1 nc2 nc3 nc4
2200 330p
WHEN DISC IS SLOWLY BRAKED BY HAND
11.2896 MHz
0269B_C

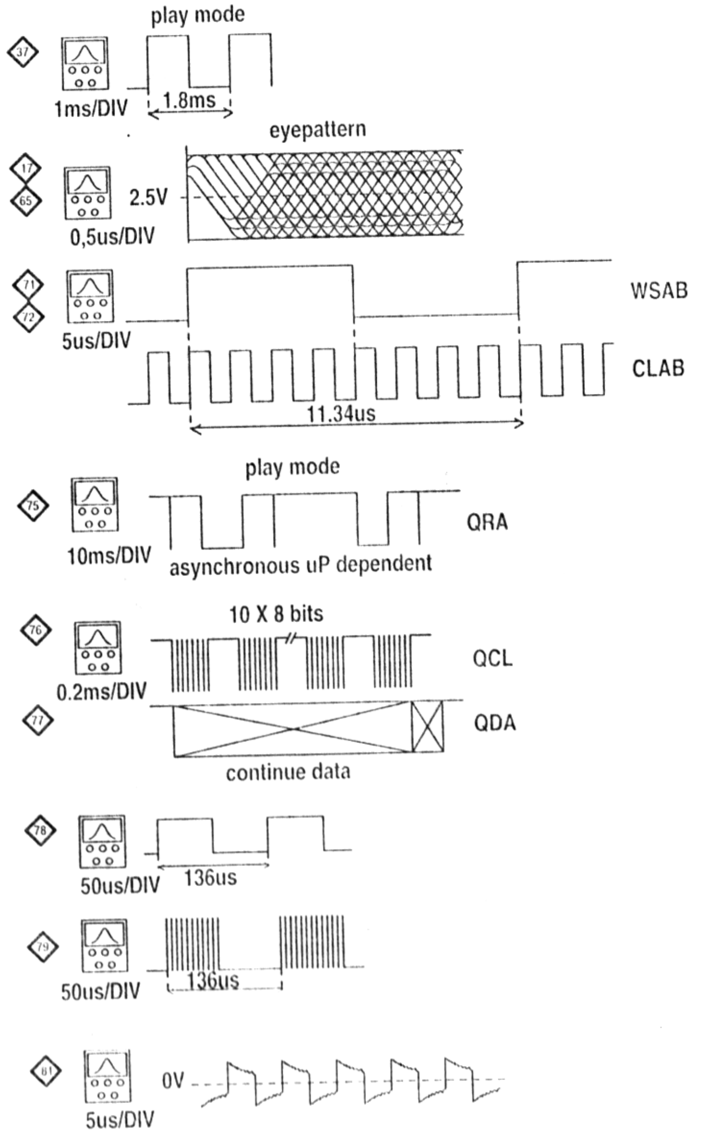
1101	F21
1101	E21
1200	J16
1201	O14
1601	C21
1601	C21
1700	F 6
1701	A11
1701	A11
2100	I 2
2101	I 2
2102	J 1
2103	N 2
2104	O 2
2105	J 2
2107	L 2
2108	O 3
2109	O 2
2131	G12
2132	F16
2133	F17
2134	G14
2135	G14
2136	G17
2137	G18
2200	O19
2201	K19
2202	H21
2203	I17
2204	I22
2205	O16
2211	J10
2212	J11
2213	M14
2213	N15
2215	H22
2216	L15
2217	O15
2218	J14
2219	J14
2601	C14
2602	C15
2603	B14
2604	B15
2605	C16
2704	F 5
2705	F 3
2706	F 3
2707	F 2
2708	F 2
3100	I 1
3101	J 2
3102	N 1
3105	L 2
3106	J 1
3107	K 1
3108	J 1
3109	O 3
3116	H 6
3131	F11
3132	F12
3133	F12
3134	F14
3135	F14
3136	F15
3137	F16
3138	G16
3139	F18
3140	F19
3141	G19
3142	G13
3143	G17
3144	D11
3145	F11
3146	E11
3147	E12
3148	E14
3149	F15
3150	E17
3151	G15
3201	G21
3211	I11
3212	L14
3213	M14
3214	C10
3215	C10
3216	I12
3217	I15
3218	J15
3219	C10
3226	L14
3227	O16
3600	B12
3602	B12
3603	B13
3604	C13
3605	B15
3606	C14
3607	B14
3608	C16
3701	F 6
3702	E 2
3703	A 4
3705	A 5
3708	B10
3711	B11
3721	E 1
3722	E 1
3723	F 1
5211	N14
6721	F 1
7100	I 7
7101	K 2
7102	N 6
7131	F13
7131	F17
7132	F19
7133	G19
7134	E12
7135	E15
7136	G15
7201	L21
7202	I18
7203	I21
7204	M17
7204	H17
7204	H18
7204	H19
7204	H20
7211	L13
7212	D10
7213	J13
7213	I13
7213	H13
7213	H22
7600	B14
7701	B 8
7702	E 3
7721	E 1
9064	A11

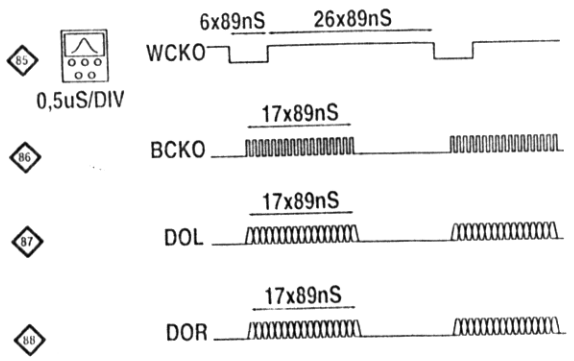

MC SIGNAL
12
5us/DIV
0V
≈11us
stand by
0V
start up
0V
play mode

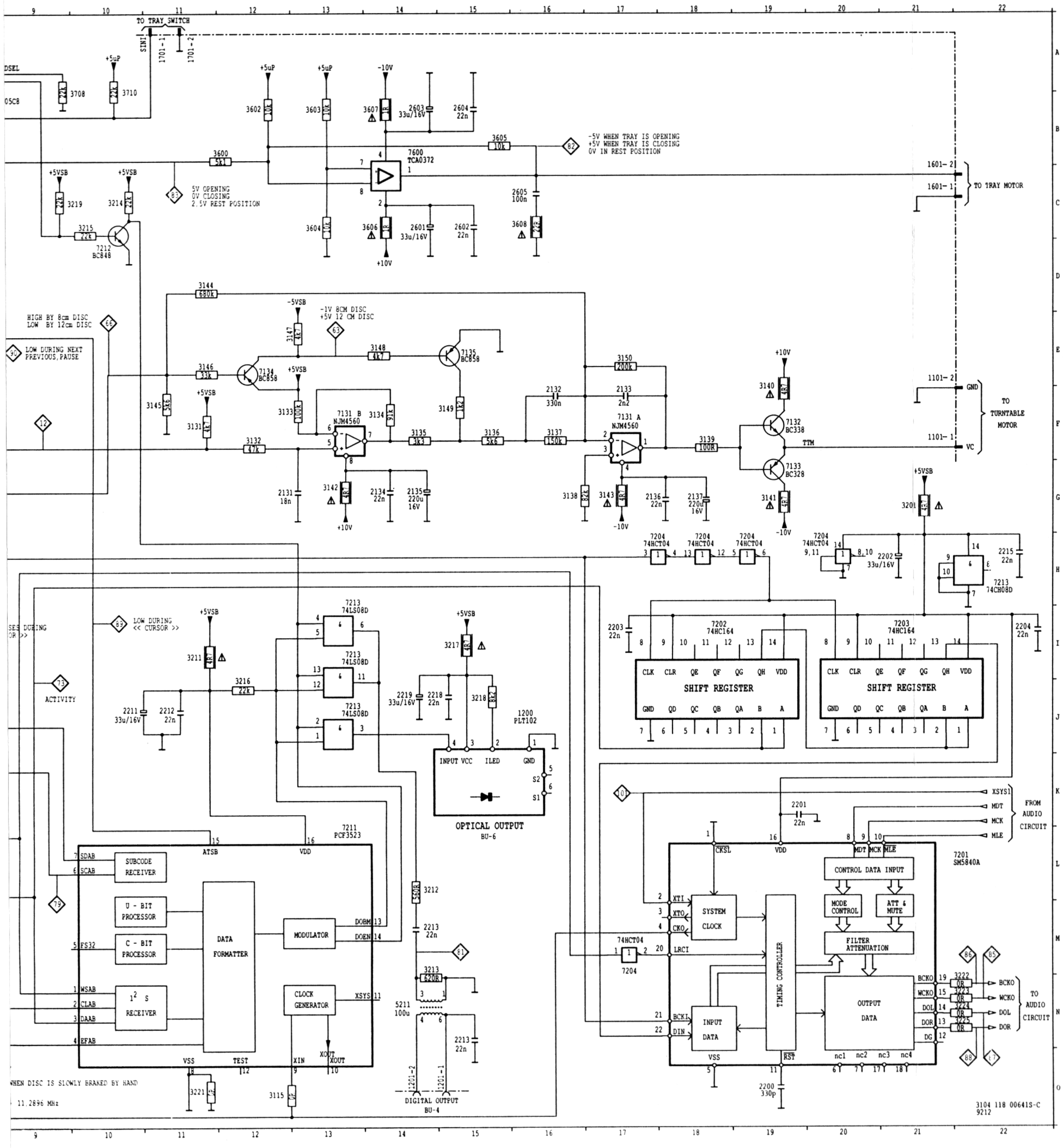

19
1ms/DIV
number depends
on search speed


STARTING UP
21
start
1ms 10ns

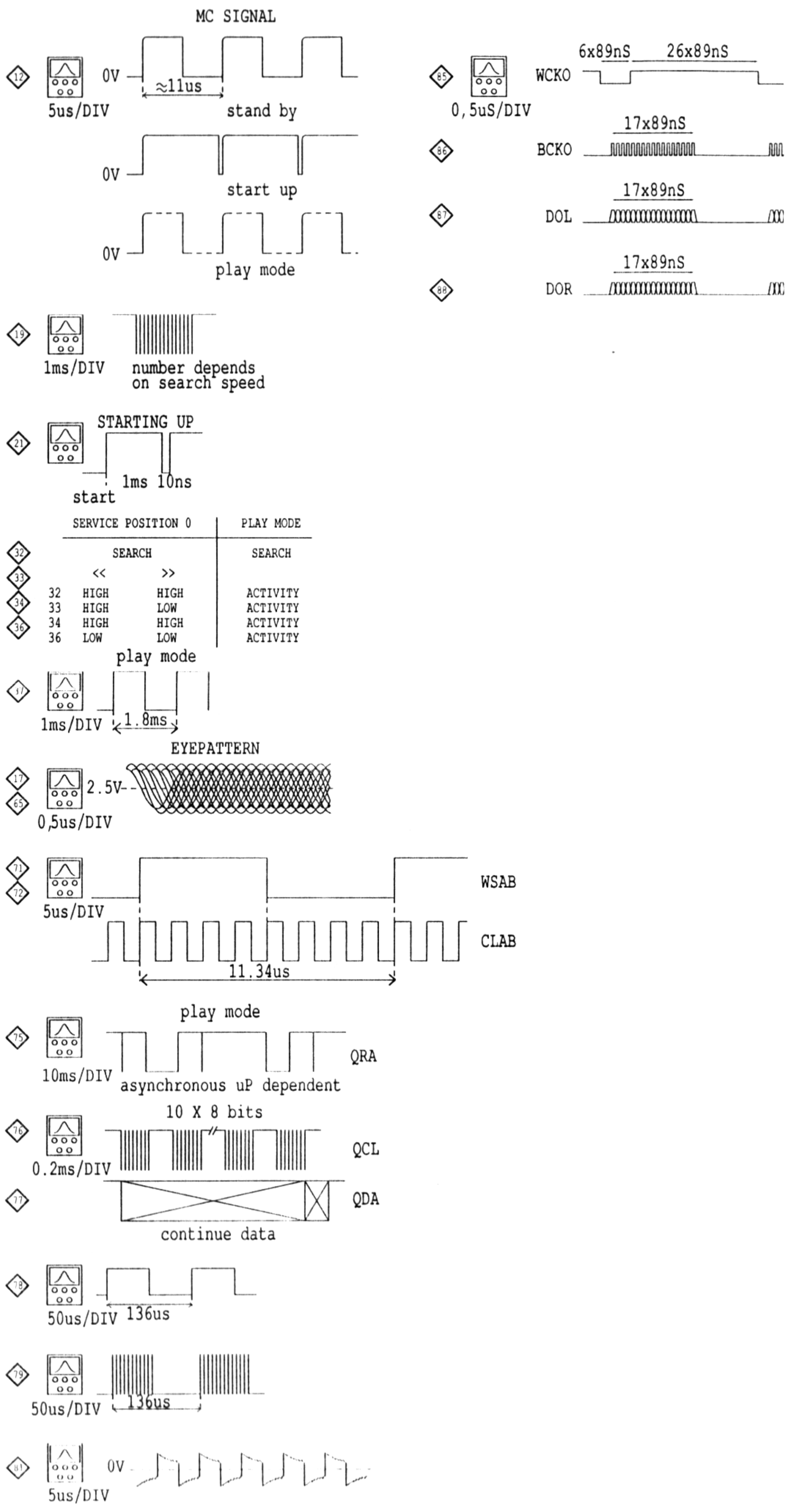
	SERVICE POSITION 0		PLAY MODE
	SEARCH		SEARCH
	<<	>>	
32	HIGH	HIGH	ACTIVITY
33	HIGH	LOW	ACTIVITY
34	HIGH	HIGH	ACTIVITY
36	LOW	LOW	ACTIVITY


play mode
37
1ms/DIV
1.8ms
eyepattern
17
65
2.5V
0,5us/DIV
71
72
5us/DIV
WSAB
CLAB
11.34us
play mode
75
10ms/DIV
asynchronous uP dependent
QRA
10 X 8 bits
76
0.2ms/DIV
QCL
77
QDA
continue data
78
50us/DIV
136us
79
50us/DIV
136us
81
0V
5us/DIV

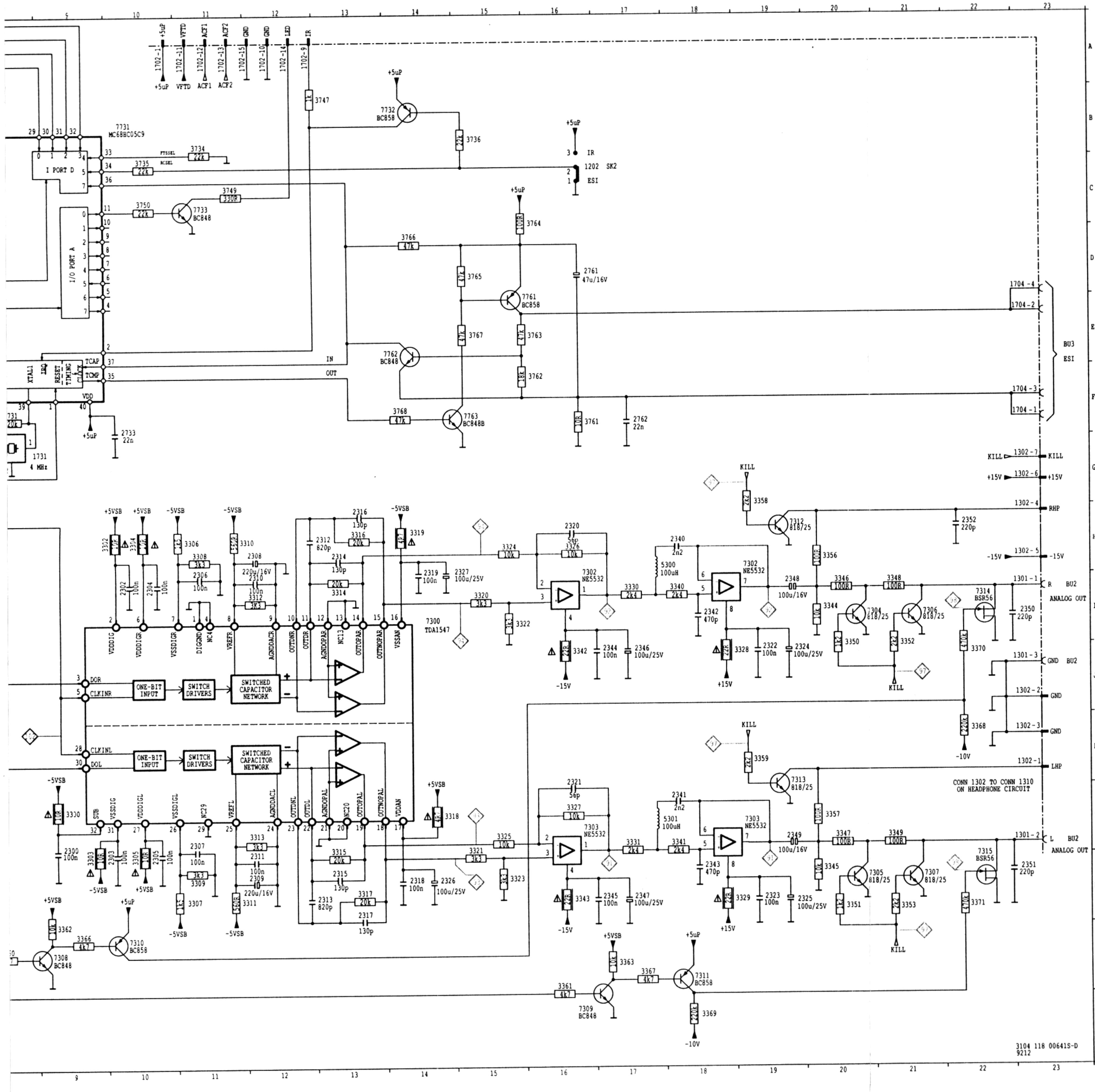

85
0,5uS/DIV
WCKO
6x89nS
26x89nS
86
BCKO
17x89nS
87
DOL
17x89nS
88
DOR
17x89nS


TO TRAY SWITCH
7600 TCA0372
-5V WHEN TRAY IS OPENING
+5V WHEN TRAY IS CLOSING
0V IN REST POSITION
TO TRAY MOTOR
5V OPENING
0V CLOSING
2.5V REST POSITION
HIGH BY 8cm DISC
LOW BY 12cm DISC
LOW DURING NEXT PREVIOUS, PAUSE
-1V 8CM DISC
+5V 12 CM DISC
7131 B NJM4560
7131 A NJM4560
7134 BC858
7135 BC858
7132 BC338
7133 BC328
7212 BC848
TO TURNTABLE MOTOR
GND
TTM
VC
LOW DURING << CURSOR >>
ACTIVITY
7213 74LS08D
7202 74HC164
7203 74HC164
SHIFT REGISTER
7204 74HCT04
7213 74CH08D
1200 PLT102
INPUT VCC
ILED
GND
OPTICAL OUTPUT
BU-6
7211 PCF3523
ATSB
VDD
SDAB
SCAB
SUBCODE RECEIVER
U - BIT PROCESSOR
C - BIT PROCESSOR
DATA FORMATTER
MODULATOR
DOBM
DOEN
FS32
WSAB
CLAB
DAAB
EFAB
I^2S RECEIVER
CLOCK GENERATOR
XSYS
VSS
TEST
XIN
XOUT
WHEN DISC IS SLOWLY BRAKED BY HAND
11.2896 MHz
5211 100u
DIGITAL OUTPUT
BU-4
XSYS
MDT
MCK
MLE
FROM AUDIO CIRCUIT
7201 SM5840A
CKSL
SYSTEM CLOCK
XTI
XTO
CKO
LRCI
BCKI
DIN
CONTROL DATA INPUT
MODE CONTROL
ATT & MUTE
FILTER ATTENUATION
TIMING CONTROLLER
INPUT DATA
OUTPUT DATA
BCKO
WCKO
DOL
DOR
DG
RST
TO AUDIO CIRCUIT
3104 118 00641S-C
9212

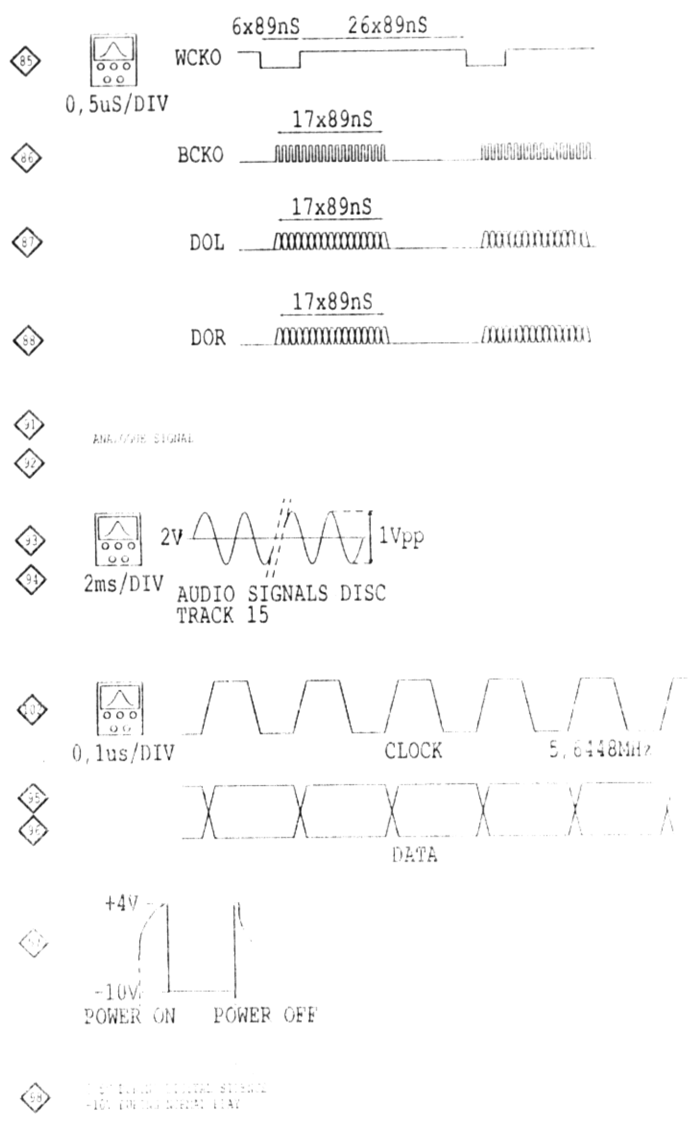
1101	F21
1101	E21
1200	J16
1201	O14
1201	O15
1601	C21
1601	C21
1700	F 6
1701	A11
1701	A11
2100	I 2
2101	I 2
2102	J 1
2103	N 2
2104	O 2
2105	J 2
2107	L 2
2108	O 3
2109	O 2
2131	G12
2132	F16
2133	F17
2134	G14
2135	G14
2136	G17
2137	G18
2200	O19
2201	K19
2202	H21
2203	I17
2204	I22
2211	J10
2212	J11
2213	M14
2213	N15
2215	H22
2218	J14
2219	J14
2601	C14
2602	C15
2603	B14
2604	B15
2605	C16
2704	F 5
2705	F 3
2706	F 3
2707	F 2
2708	F 2
3100	I 1
3101	J 2
3102	N 1
3105	L 2
3106	J 1
3107	K 1
3108	J 1
3109	O 3
3110	I 8
3111	I 6
3112	H 6
3113	I 7
3114	I 5
3115	O12
3116	H 6
3131	F11
3132	F12
3133	F12
3134	F14
3135	F14
3136	F15
3137	F16
3138	G16
3139	F18
3140	F19
3141	G19
3142	G13
3143	G17
3144	D11
3145	F11
3146	E11
3147	E12
3148	E14
3149	F15
3150	E17
3201	G21
3211	I11
3212	L14
3213	M14
3214	C10
3215	C10
3216	I12
3217	I15
3218	J15
3219	C10
3221	O11
3222	N22
3223	N22
3224	N22
3225	N22
3600	B12
3602	B12
3603	B13
3604	C13
3605	B15
3606	C14
3607	B14
3608	C16
3701	F 6
3702	E 2
3703	A 4
3705	A 5
3708	B10
3710	B10
3721	E 1
3722	E 1
3723	F 1
5211	N14
6721	F 1
7100	I 7
7101	K 2
7102	N 6
7131	F13
7131	F17
7132	F19
7133	G19
7134	E12
7135	E15
7201	L21
7202	I18
7203	I21
7204	M17
7204	H17
7204	H18
7204	H19
7204	H20
7211	L13
7212	D10
7213	J13
7213	I13
7213	H13
7213	H22
7600	B14
7701	B 8
7702	E 3
7721	E 1


MC SIGNAL
12
5us/DIV
0V
≈11us
stand by
start up
play mode
19
1ms/DIV
number depends on search speed
21
STARTING UP
start
1ms
10ns
32
33
34
36
play mode
37
1ms/DIV
1.8ms
EYEPATTERN
17
65
2.5V
0,5us/DIV
71
72
5us/DIV
WSAB
CLAB
11.34us
play mode
75
10ms/DIV
QRA
asynchronous uP dependent
10 X 8 bits
76
0.2ms/DIV
QCL
77
QDA
continue data
78
50us/DIV
136us
79
50us/DIV
136us
81
5us/DIV
0V
85
0,5uS/DIV
WCKO
6x89nS
26x89nS
86
BCKO
17x89nS
87
DOL
17x89nS
88
DOR
17x89nS

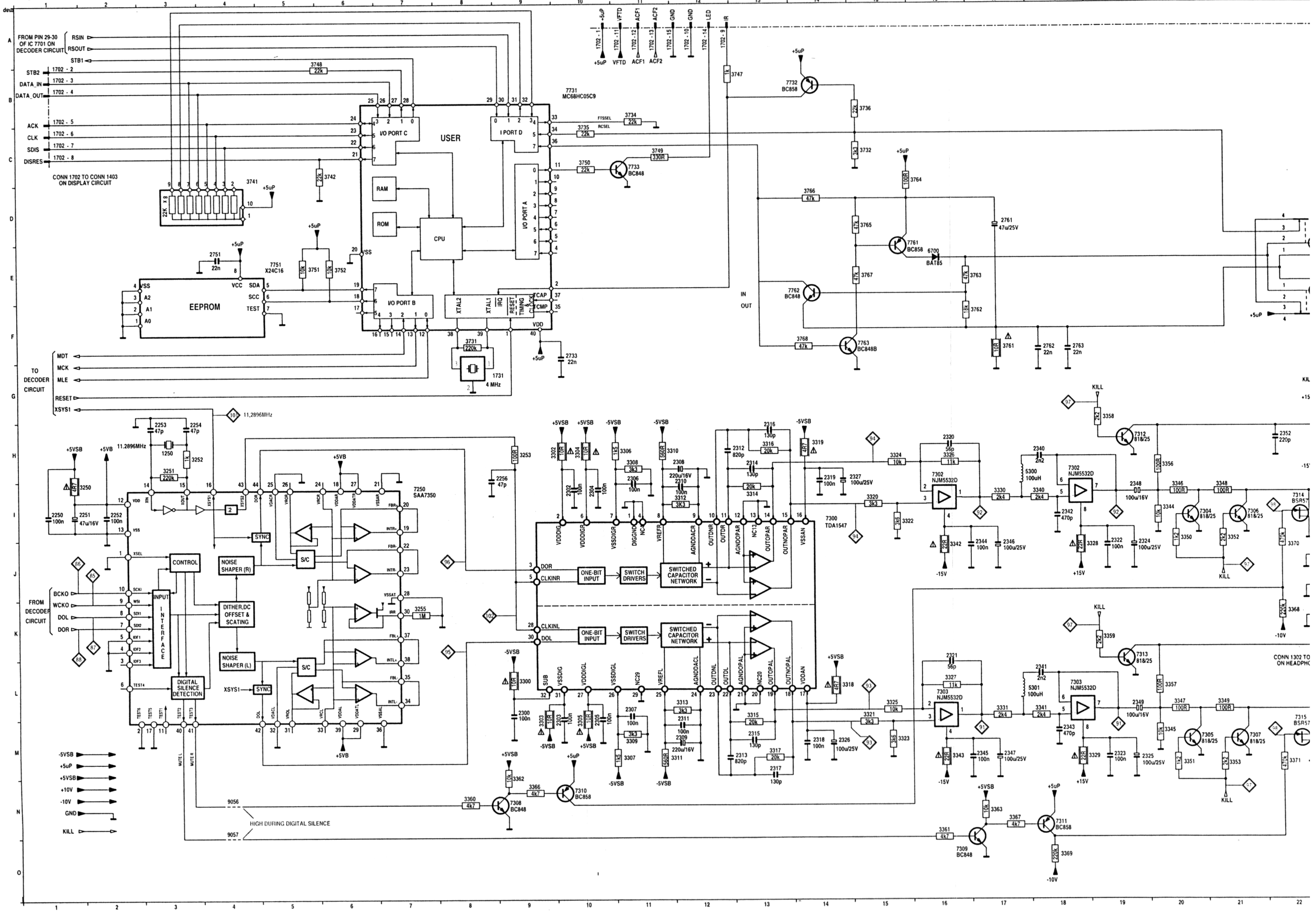
SERVICE POSITION 0			PLAY MODE
	SEARCH		SEARCH
	<<	>>	
32	HIGH	HIGH	ACTIVITY
33	HIGH	LOW	ACTIVITY
34	HIGH	HIGH	ACTIVITY
36	LOW	LOW	ACTIVITY

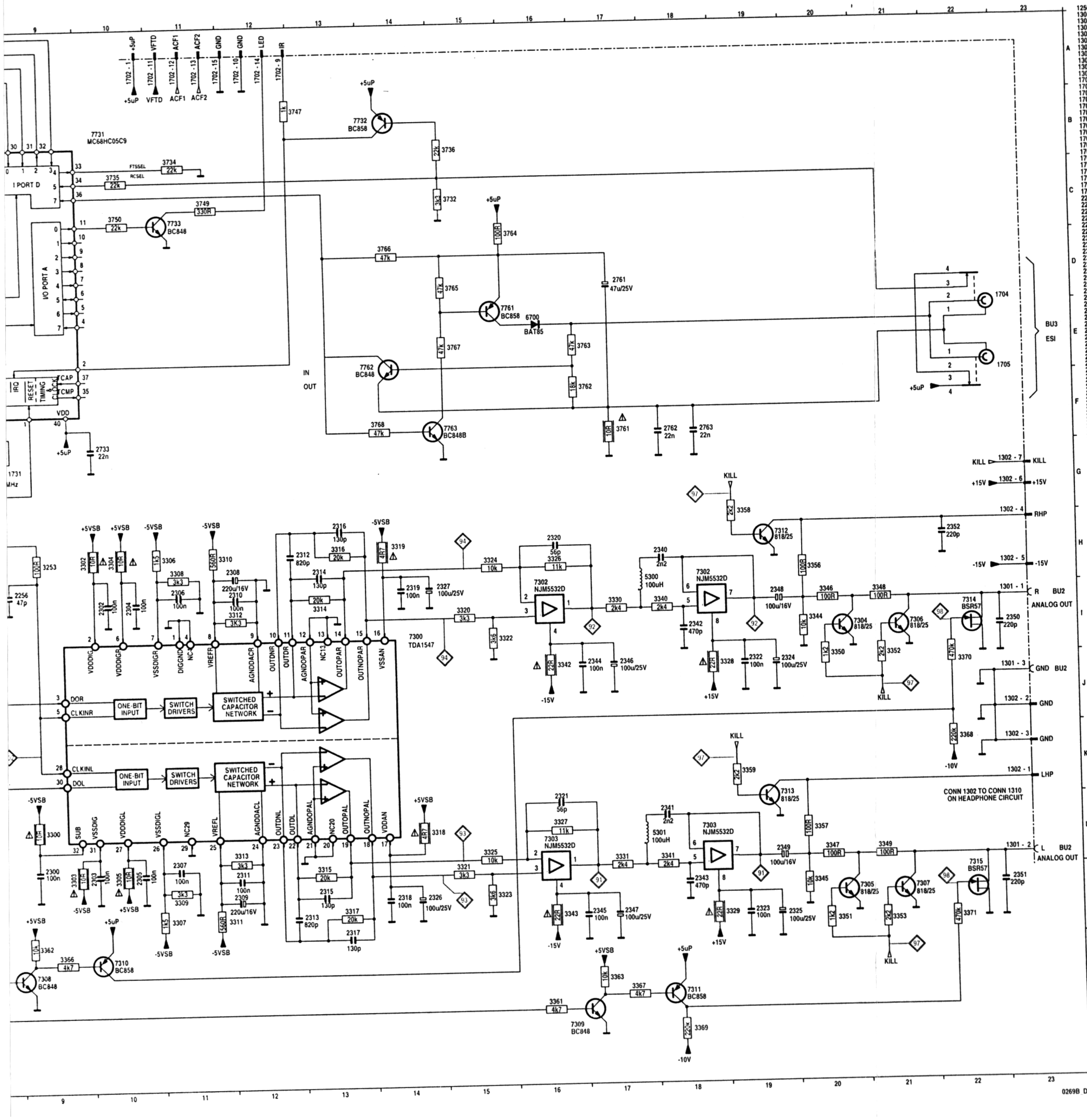

7731
MC68HC05C9
I PORT D
I/O PORT A
TCAP
TCMP
VDD
XTAL1
IRQ
RESET
TIMING CLOCK
1731
4 MHz
+5uP
VFTD
ACF1
ACF2
GND
LED
IR
1702-1
1702-11
1702-12
1702-13
1702-15
1702-10
1702-14
1702-9
3747
7732
BC858
3736
3734
22k
3735
22k
3749
330R
3750
22k
7733
BC848
1202
SK2
IR
ESI
3766
47k
3765
3764
100R
7761
BC858
2761
47u/16V
7762
BC848
3767
3763
3762
IN
OUT
3768
47k
7763
BC848B
3761
2762
22n
2733
22n
1704-4
1704-2
1704-3
1704-1
BU3
ESI
KILL
+15V
-15V
1302-7
1302-6
1302-4
1302-5
1301-1
1301-3
1302-2
1302-3
1302-1
1301-2
RHP
LHP
R
L
BU2
ANALOG OUT
GND
7300
TDA1547
VDDDIG
VDDDIGR
VSSDIGR
DIGGND
NC4
VREFR
AGNDDACR
OUTDNR
OUTDR
AGNDOPAR
NC13
OUTOPAR
OUTNOPAR
VSSAN
DOR
CLKINR
CLKINL
DOL
ONE-BIT INPUT
SWITCH DRIVERS
SWITCHED CAPACITOR NETWORK
SUB
VSSDIG
VDDDIGL
VSSDIGL
NC29
VREFL
AGNDDACL
OUTNL
OUTDL
AGNDOPAL
NC20
OUTOPAL
OUTNOPAL
VDDAN
+5VSB
-5VSB
3302
3304
3306
3308
3k3
3310
2302
100n
2304
100n
2306
100n
2308
220u/16V
2310
100n
3312
3k3
2312
820p
2314
130p
2316
130p
3316
20k
3314
20k
3319
4k7
2319
100n
2327
100u/25V
3320
3k3
3322
3k3
3324
10k
2320
56p
3326
10k
7302
NE5532
3330
2k4
3340
2k4
2340
2n2
5300
100uH
2342
470p
3342
22R
2344
100n
2346
100u/25V
3328
22R
2322
100n
2324
100u/25V
2348
100u/16V
3346
100R
3348
100R
7312
BC818/25
3358
2k2
3356
100R
3344
10k
7304
BC818/25
7306
BC818/25
3350
1k2
3352
2k2
7314
BSR56
3370
10k
2350
220p
2352
220p
3368
220k
-10V
7313
BC818/25
3359
2k2
3357
100R
3300
100R
2300
100n
3303
100R
2303
100n
3305
100R
2305
100n
2307
100n
3309
3k3
3307
4k7
3311
220R
3313
3k3
2311
100n
2309
220u/16V
3315
20k
2315
130p
2313
820p
3317
20k
2317
130p
3318
4k7
2318
100n
2326
100u/25V
3321
3k3
3323
3k3
3325
10k
2321
56p
3327
10k
7303
NE5532
3331
2k4
3341
2k4
2341
2n2
5301
100uH
2343
470p
3343
22R
2345
100n
2347
100u/25V
3329
22R
2323
100n
2325
100u/25V
2349
100u/16V
3347
100R
3349
100R
3345
10k
7305
BC818/25
7307
BC818/25
3351
1k2
3353
2k2
7315
BSR56
3371
10k
2351
220p
3362
10k
3366
4k7
7308
BC848
7310
BC858
3361
4k7
7309
BC848
3363
10k
3367
4k7
7311
BC858
3369
220k
CONN 1302 TO CONN 1310 ON HEADPHONE CIRCUIT
3104 118 00641S-D
9212

1202	C16
1250	H 3
1301	J22
1301	L22
1301	I22
1302	H23
1302	G23
1302	K23
1302	G23
1302	J23
1302	H23
1302	K23
1702	B 1
1702	C 1
1702	C 1
1702	C 1
1702	B 1
1702	B 1
1702	B 1
1702	A10
1702	A11
1702	A11
1702	A11
1702	A12
1702	A12
1702	A12
1702	A12
1704	D22
1704	E22
1704	F22
1704	F22
1731	G 9
2250	I 1
2251	I 2
2252	I 2
2253	H 3
2254	H 3
2255	G 2
2300	L 9
2302	I10
2303	L10
2304	I10
2305	L10
2306	H11
2307	L11
2308	H12
2309	M12
2310	I12
2311	L12
2312	H13
2313	M13
2314	H13
2315	M13
2316	H13
2317	M13
2318	M14
2319	H14
2320	H16
2321	K16
2322	J19
2323	M19
2324	J19
2325	M19
2326	M14
2327	H15
2340	H18
2341	L18
2342	I18
2343	M18
2344	J17
2345	M17
2346	J17
2347	M17
2348	I19
2349	L19
2350	I23
2351	M23
2352	H22
2733	F10
2751	E 4
2761	D16
2762	F17
3250	I 2
3251	H 3
3252	H 3
3255	K 7
3300	L 9
3302	H10
3303	L 9
3304	H10
3305	L10
3306	H11
3307	M11
3308	H11
3309	M11
3310	H12
3311	M12
3312	I12
3313	L12
3314	I13
3315	L13
3316	H13
3317	M13
3318	L14
3319	H14
3320	I15
3321	L15
3322	I15
3323	M15
3324	H15
3325	L15
3326	H16
3327	L16
3328	J19
3329	M19
3330	I17
3331	L17
3340	I18
3341	L18
3342	J16
3343	M16
3344	I20
3345	M20
3346	I20
3347	L20
3348	I21
3349	L21
3350	J20
3351	M20
3352	J21
3353	M21
3356	H20
3357	L20
3358	G19
3359	K19
3360	N 8
3361	N16
3362	N 9
3363	N17
3366	N 9
3367	N17
3368	K22
3369	O18
3370	J22
3371	M22
3731	F 8
3734	B11
3735	C10
3736	B15
3741	C 4
3742	C 6
3747	B13
3748	A 6
3749	C11
3750	C10
3751	E 5
3752	E 6
3761	F16
3762	F16
3763	E16
3764	C16
3765	D15
3766	D14
3767	E15
3768	F14
3999	A15
5300	H18
5301	L18
7250	I 7
7300	I14
7302	H16
7302	H19
7303	L16
7303	L19
7304	I20
7305	M20
7306	I21
7307	M21
7308	N 9
7309	O16
7310	N10
7311	N18
7312	H19
7313	K19
7314	I22
7315	M22
7731	B10
7732	B14
7733	C11
7751	E 5
7761	E15
7762	E14
7763	F15
9056	N 4
9057	N 4

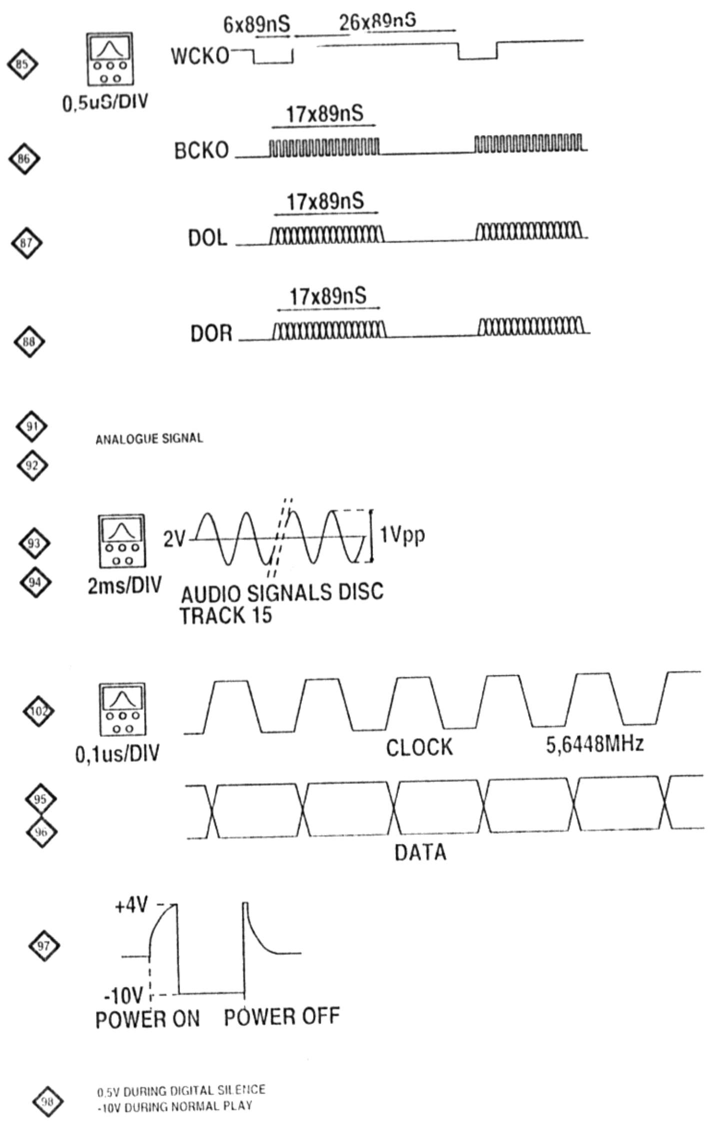

6x89nS
26x89nS
WCKO
0,5uS/DIV
17x89nS
BCKO
17x89nS
DOL
17x89nS
DOR
ANALOGUE SIGNAL
2V
1Vpp
2ms/DIV
AUDIO SIGNALS DISC
TRACK 15
0,1us/DIV
CLOCK
5,6448MHz
DATA
+4V
-10V
POWER ON
POWER OFF

AUDIO CIRCUIT DIAGRAM CD951

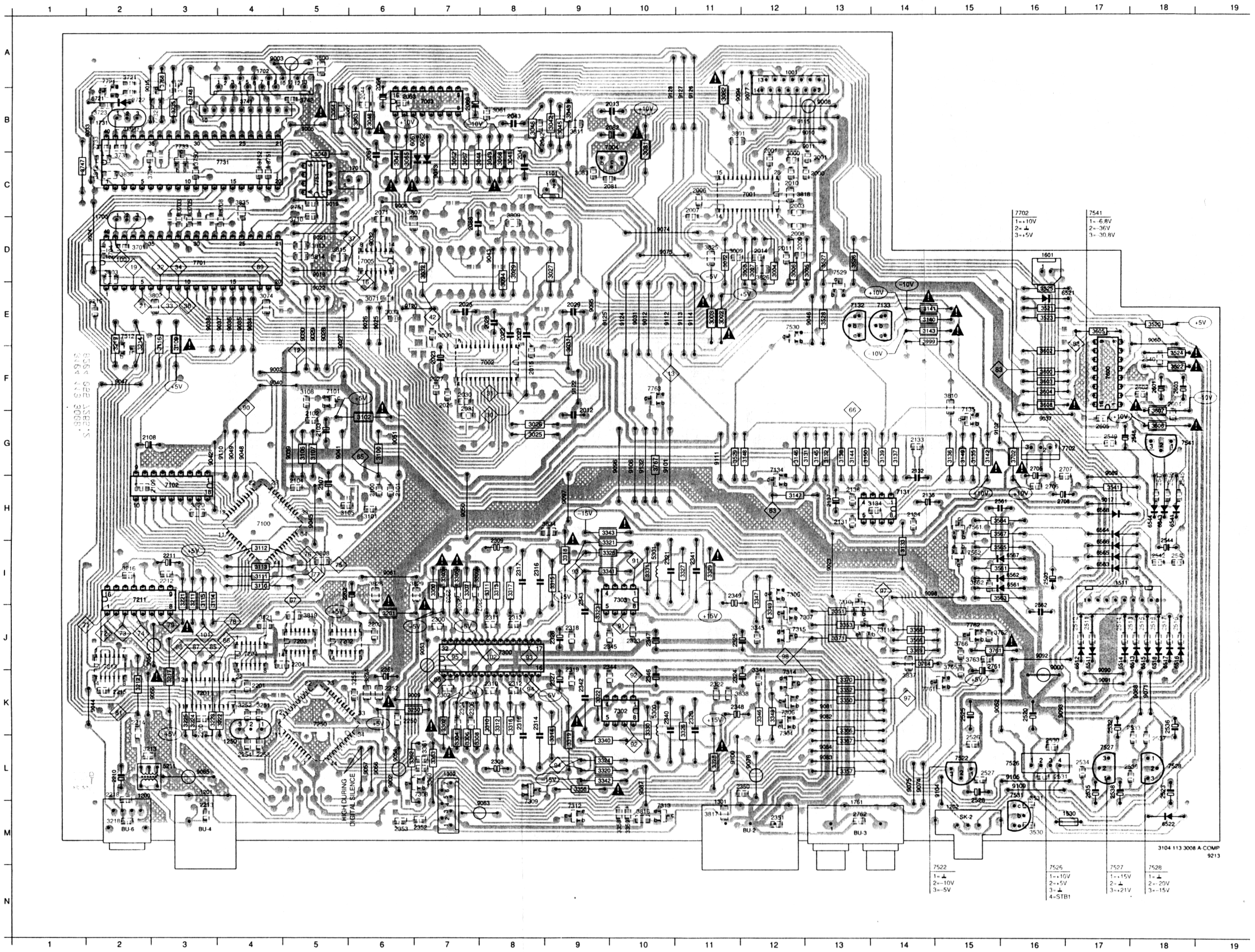

FROM PIN 29-30 OF IC 7701 ON DECODER CIRCUIT
RSIN
RSOUT
STB1
STB2
DATA_IN
DATA_OUT
ACK
CLK
SDIS
DISRES
CONN 1702 TO CONN 1403 ON DISPLAY CIRCUIT
7731 MC68HC05C9
USER
I/O PORT C
I PORT D
I/O PORT A
I/O PORT B
RAM
ROM
CPU
EEPROM
7751 X24C16
VCC
SDA
SCC
TEST
XTAL2
XTAL1
IRQ
RESET
TCAP
TCMP
VDD
VSS
1731 4 MHz
TO DECODER CIRCUIT
MDT
MCK
MLE
RESET
XSYS1
11,2896MHz
+5uP
VFTD
ACF1
ACF2
GND
LED
IR
7732 BC858
7733 BC848
7761 BC858
6700 BAT85
7762 BC848
7763 BC848B
IN
OUT
2761 47u/25V
7250 SAA7350
CONTROL
INPUT INTERFACE
NOISE SHAPER (R)
NOISE SHAPER (L)
DITHER,DC OFFSET & SCALING
DIGITAL SILENCE DETECTION
SYNC
S/C
XSYS1
FROM DECODER CIRCUIT
BCKO
WCKO
DOL
DOR
7300 TDA1547
ONE-BIT INPUT
SWITCH DRIVERS
SWITCHED CAPACITOR NETWORK
DOR
CLKINR
CLKINL
DOL
7302 NJM5532D
7303 NJM5532D
5300 100uH
5301 100uH
7304 818/25
7305 818/25
7306 818/25
7307 818/25
7312 818/25
7313 818/25
7314 BSR57
7315 BSR57
7308 BC848
7309 BC848
7310 BC858
7311 BC858
KILL
CONN 1302 TO ON HEADPHO
HIGH DURING DIGITAL SILENCE
9056
9057
-5VSB
+5uP
+5VSB
+10V
-10V
GND
KILL
0269R-D


9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
+5uP
VFTD
ACF1
ACF2
GND
LED
IR
1702 - 1
1702 - 11
1702 - 12
1702 - 13
1702 - 15
1702 - 10
1702 - 14
1702 - 9
7731
MC68HC05C9
I PORT D
I/O PORT A
FTSSEL
RCSEL
3734 22k
3735 22k
3749 330R
3750 22k
7733 BC848
3747 1k
7732 BC858
3736 22k
3732 3k3
3764 100R
3766 47k
3765 47k
7761 BC858
6700 BAT85
3767 47k
3763 47k
3762 18k
7762 BC848
7763 BC848B
3768 47k
3761 10R
2761 47u/25V
2762 22n
2763 22n
IN
OUT
IRQ
RESET
TIMING CLOCK
CAP
CMP
VDD
2733 22n
1704
1705
BU3
ESI
1731
MHz
KILL
1302 - 7
+15V
1302 - 6
1302 - 4
RHP
1302 - 5
-15V
1301 - 1
R
BU2
ANALOG OUT
1301 - 3
GND
1302 - 2
1302 - 3
1302 - 1
LHP
CONN 1302 TO CONN 1310 ON HEADPHONE CIRCUIT
1301 - 2
L
+5VSB
-5VSB
3253
2256 47p
3302 10R
3304 10R
3306 1k5
3308 3k3
3310 560R
2302 100n
2304 100n
2306 100n
2308 220u/16V
2310 100n
3312 3k3
2312 820p
2316 130p
3316 20k
2314 130p
3314 20k
3319 4R7
2319 100n
2327 100u/25V
3320 3k3
3322 3k6
7300 TDA1547
VDDDIGR
VDDDIGR
VSSDIGR
DIGGND
NC
VREFR
AGNDDACR
OUTDR
OUTDR
AGNDOPAR
NC13
OUTOPAR
OUTNOPAR
VSSAN
DOR
CLKINR
ONE-BIT INPUT
SWITCH DRIVERS
SWITCHED CAPACITOR NETWORK
CLKINL
DOL
SUB
VSSDIG
VDDDIGL
VSSDIGL
NC29
VREFL
AGNDDACL
OUTDNL
OUTDL
AGNDOPAL
NC20
OUTOPAL
OUTNOPAL
VDDAN
3300 10R
2300 100n
3303 10R
3305 10R
2303 100n
2305 100n
2307 100n
3309 3k3
3313 3k3
2311 100n
2309 220u/16V
3311 560R
3307 1k5
2313 820p
3315 20k
2315 130p
3317 20k
2317 130p
3318 4R7
2318 100n
2326 100u/25V
3321 3k3
3323 3k6
2320 56p
3326 11k
3324 10k
7302 NJM5532D
3342 22R
2344 100n
2346 100u/25V
3330 2k4
2340 2n2
5300 100uH
3340 2k4
2342 470p
3328 22R
2322 100n
2324 100u/25V
2348 100u/16V
3358 2k2
7312 818/25
3356 100R
3346 100R
3348 100R
3344 10k
7304 818/25
7306 818/25
3350 1k2
3352 2k2
7314 BSR57
2350 220p
2352 220p
3370 470k
3368 220k
-10V
2321 56p
3327 11k
3325 10k
7303 NJM5532D
3343 22R
2345 100n
2347 100u/25V
3331 2k4
2341 2n2
5301 100uH
3341 2k4
2343 470p
3329 22R
2323 100n
2325 100u/25V
2349 100u/16V
3359 2k2
7313 818/25
3357 100R
3347 100R
3349 100R
3345 10k
7305 818/25
7307 818/25
3351 1k2
3353 2k2
7315 BSR57
2351 220p
3371 470k
3362 10k
3366 4k7
7310 BC858
7308 BC848
3361 4k7
7309 BC848
3363 10k
3367 4k7
7311 BC858
3369 22k
-10V
91
92
93
94
97
98
0269B_D

1250	H 3
1301	J22
1301	L22
1301	I22
1302	H23
1302	G23
1302	K23
1302	G23
1302	J23
1302	H23
1302	K23
1702	B 1
1702	C 1
1702	C 1
1702	C 1
1702	B 1
1702	B 1
1702	B 1
1702	A10
1702	A11
1702	A11
1702	A11
1702	A12
1702	A12
1702	A12
1702	A12
1704	D23
1705	E23
1731	G 9
2250	I 1
2251	I 2
2252	I 2
2253	H 3
2254	H 3
2256	H 9
2300	L 9
2302	I10
2303	L10
2304	I10
2305	L10
2306	H11
2307	L11
2308	H12
2309	M12
2310	I12
2311	L12
2312	H13
2313	M13
2314	H13
2315	M13
2316	H13
2317	M13
2318	M14
2319	H14
2320	H16
2321	K16
2322	J19
2323	M19
2324	J19
2325	M19
2326	M14
2327	H15
2340	H18
2341	L18
2342	I18
2343	M18
2344	J17
2345	M17
2346	J17
2347	M17
2348	I19
2349	L19
2350	I23
2351	M23
2352	H22
2733	F10
2751	E 4
2761	D17
2762	F18
2763	F18
3250	I 2
3251	H 3
3252	H 3
3253	H 9
3255	K 7
3300	L 9
3302	H10
3303	L 9
3304	H10
3305	L10
3306	H11
3307	M11
3308	H11
3309	M11
3310	H12
3311	M12
3312	I12
3313	L12
3314	I13
3315	L13
3316	H13
3317	M13
3318	L14
3319	H14
3320	I15
3321	L15
3322	I15
3323	M15
3324	H15
3325	L15
3326	H16
3327	L16
3328	J19
3329	M19
3330	I17
3331	L17
3340	I18
3341	L18
3342	J16
3343	M16
3344	I20
3345	M20
3346	I20
3347	L20
3348	I21
3349	L21
3350	J20
3351	M20
3352	J21
3353	M21
3356	H20
3357	L20
3358	G19
3359	K19
3360	N 8
3361	N16
3362	N 9
3363	N17
3366	N 9
3367	N17
3368	K22
3369	O18
3370	J22
3371	M22
3731	F 8
3732	C15
3734	B11
3735	C10
3736	B15
3741	C 4
3742	C 6
3747	B13
3748	A 6
3749	C11
3750	C10
3751	E 5
3752	E 6
3761	F17
3762	F17
3763	E17
3764	C16
3765	D15
3766	D14
3767	E15
3768	F14
5300	H18
5301	L18
6700	E16
7250	I 7
7300	I14
7302	H16
7302	H19
7303	L16
7303	L19
7304	I20
7305	M20
7306	I21
7307	M21
7308	N 9
7309	O16
7310	N10
7311	N18
7312	H19
7313	K19
7314	I22
7315	M22
7731	B10
7732	B14
7733	C11
7751	E 5
7761	E15
7762	E14
7763	F15
9056	N 4
9057	N 4


85
0,5uS/DIV
WCKO
6x89nS
26x89nS
86
BCKO
17x89nS
87
DOL
17x89nS
88
DOR
17x89nS
91
92
ANALOGUE SIGNAL
93
94
2ms/DIV
2V
1Vpp
AUDIO SIGNALS DISC TRACK 15
102
0,1us/DIV
CLOCK
5,6448MHz
95
96
DATA
97
+4V
-10V
POWER ON
POWER OFF
98
0.5V DURING DIGITAL SILENCE
-10V DURING NORMAL PLAY

MAIN PANEL COMPONENT SIDE



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
A B C D E F G H I J K L M N
HIGH DURING DIGITAL SILENCE
BU-6
BU-4
BU-2
BU-3
SK-2
7702
1=+10V
2=⊥
3=+5V
7541
1=-6,8V
2=-36V
3=-30,8V
7522
1=⊥
2=-10V
3=-5V
7526
1=+10V
2=+5V
3=⊥
4=STB1
7527
1=+15V
2=⊥
3=+21V
7528
1=⊥
2=-20V
3=-15V
3104 113 3008 A-COMP
9213

1001	A12	2341	I11	3108	F5	3527	D13	7131	H14	9078	L12
1101	C8	2342	K9	3109	F3	3528	E13	7132	E13	9081	K13
1200	L2	2343	J9	3110	I4	3529	G11	7133	E14	9082	K13
1201	L3	2344	J9	3111	I4	3530	M16	7134	G12	9083	L13
1202	M15	2345	J9	3112	I4	3531	L16	7135	G15	9084	L13
1250	L4	2346	K10	3113	I4	3541	H17	7201	K3	9087	L10
1301	M11	2347	J10	3114	J3	3561	I15	7202	J5	9088	K18
1302	L7	2348	K11	3115	J3	3562	I15	7203	J5	9089	G17
1511	I17	2349	I11	3116	F3	3563	I15	7204	J4	9090	K17
1530	M16	2350	L11	3131	G13	3564	H15	7211	I2	9091	K17
1601	D16	2351	M12	3132	G13	3565	I15	7213	J2	9092	J16
1700	C2	2352	M6	3133	I14	3566	J14	7250	K5	9093	K16
1702	A4	2353	M6	3134	H13	3567	H15	7300	J8	9094	B11
1731	B2	2503	I16	3135	G15	3600	F16	7302	K10	9095	E9
1761	M13	2511	J17	3136	G15	3602	F16	7303	I10	9096	G10
2000	C13	2512	J17	3137	G14	3603	F16	7304	L12	9097	H9
2001	B12	2513	J18	3138	G13	3604	F16	7305	I12	9098	I14
2003	C12	2514	J17	3139	G14	3605	E17	7306	K12	9100	L11
2006	C11	2515	J18	3140	E14	3606	G18	7307	J12	9101	G10
2007	C11	2516	J18	3141	E14	3607	G18	7308	L7	9102	G15
2008	D12	2517	J18	3142	G15	3608	F16	7309	M8	9104	L15
2009	D12	2518	J18	3143	E14	3701	D2	7310	I13	9105	L16
2010	C12	2520	K16	3144	G13	3702	G16	7311	J14	9106	G10
2011	D12	2523	L18	3145	G13	3703	C3	7312	M9	9109	L16
2012	G9	2525	K15	3146	G12	3705	C3	7313	M10	9110	G4
2013	B9	2526	L15	3147	H12	3708	C4	7314	K12	9111	G11
2014	D12	2527	L15	3148	G12	3710	D5	7315	J12	9112	E10
2015	F8	2528	M15	3149	G15	3721	A2	7512	E2	9113	E11
2021	E8	2530	L16	3150	G13	3722	B2	7522	L15	9114	E11
2022	E8	2531	L16	3201	J6	3723	B2	7526	L16	9115	B12
2023	F7	2532	K17	3211	J3	3731	C2	7527	L17	9120	E6
2025	E7	2533	K17	3212	K2	3734	C2	7528	L18	9122	F9
2026	F7	2534	L17	3213	L2	3735	B3	7529	D13	9124	E10
2027	F7	2535	L17	3214	F2	3736	B3	7530	E12	9125	E9
2028	E8	2536	K18	3215	E2	3741	B4	7531	L16	9126	B11
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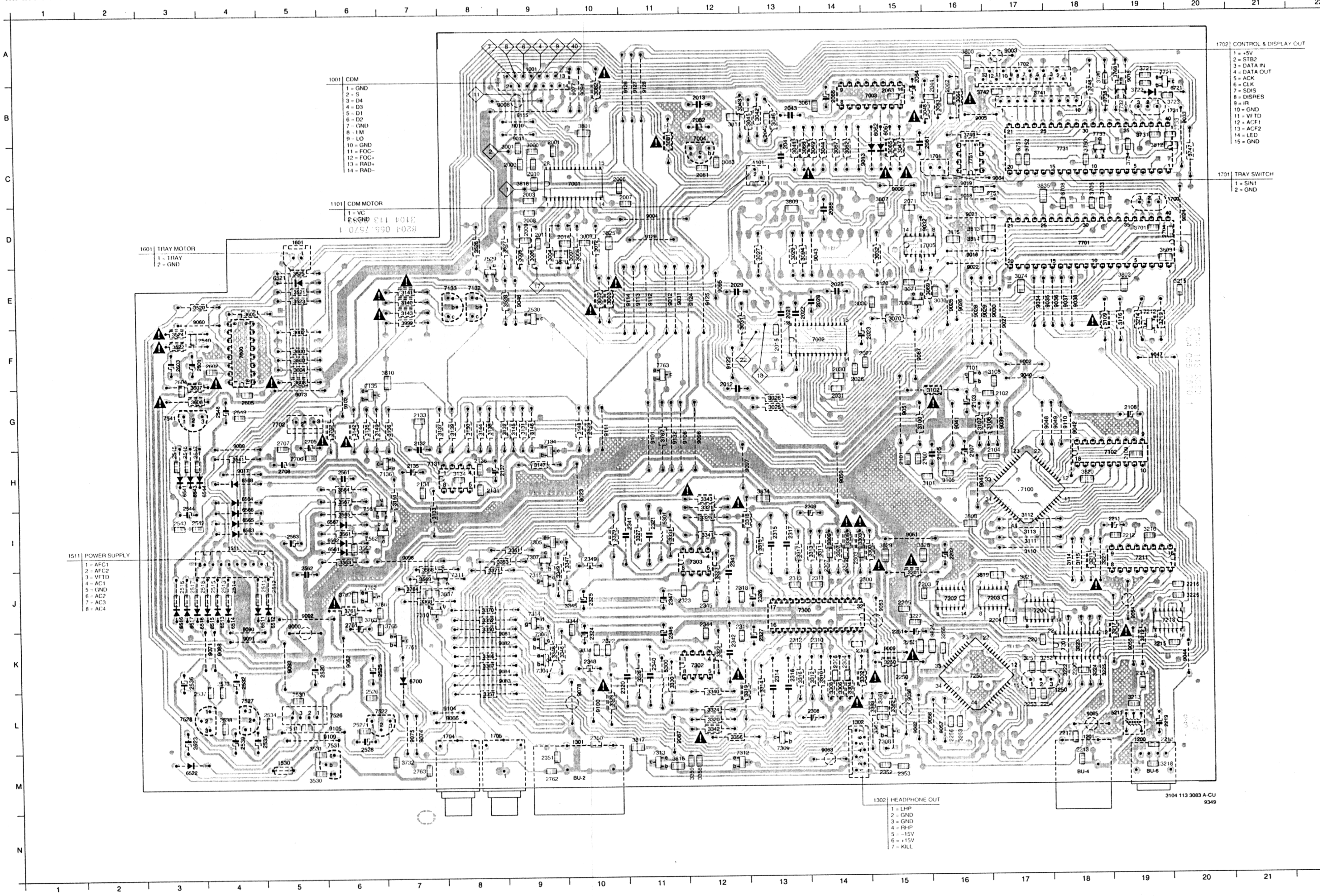
2030	F7	2538	L17	3217	K3	3747	C1	7561	H15	9128	B10
2031	F7	2538	L17	3218	M2	3748	B3	7562	I15	9132	G10
2041	C8	2540	F18	3219	F2	3750	C3	7600	F17		
2042	B8	2542	I18	3221	J3	3751	C4	7701	D3		
2043	B8	2543	I18	3222	K4	3752	C4	7702	G16		
2044	B6	2544	I18	3223	K3	3761	J15	7721	A2		
2061	C6	2545	H18	3224	K3	3762	J15	7731	C3		
2062	B6	2546	H18	3225	K3	3763	J15	7732	B3		
2063	B6	2547	H18	3250	K6	3764	J14	7733	B3		
2064	B6	2548	G18	3251	K4	3765	J15	7751	C5		
2066	B7	2549	G17	3252	K4	3766	J15	7761	K14		
2071	C6	2561	H15	3255	K6	3767	G10	7762	J15		
2081	C9	2562	J16	3300	I7	3768	A3	7763	F10		
2082	B9	2600	E16	3302	K7	3800	A5	9000	J16		
2084	D8	2601	F18	3303	I7	3801	B11	9002	L6		
2088	D7	2602	F18	3304	L7	3802	E2	9002	F4		
2089	D7	2603	F18	3305	I7	3803	D2	9003	A4		
2090	C8	2604	F18	3306	L7	3807	C6	9005	B5		
2100	H6	2605	G17	3307	I7	3808	I5	9006	C6		
2101	H6	2704	D2	3308	L8	3809	C8	9008	B13		
2102	G5	2705	G16	3309	I8	3810	F15	9009	K6		
2103	G5	2706	H16	3310	K8	3811	B9	9010	B12		
2104	H5	2707	G16	3311	I8	3812	C2	9011	B12		
2107	H5	2708	H16	3312	K8	3813	D5	9012	E10		
2108	G2	2733	B2	3313	I8	3814	D5	9013	C7		
2109	H3	2751	C5	3314	L9	3815	D5	9015	B2		
2131	H13	2761	J15	3315	I9	3816	M10	9016	D5		
2132	G14	2762	M13	3316	K8	3817	M11	9017	H17		
2133	G14	3000	C12	3317	I8	3818	C12	9019	C5		
2134	H14	3001	C13	3318	I9	3819	J5	9021	D5		
2135	H14	3002	E11	3319	L9	3820	H3	9022	E5		
2136	H13	3003	E11	3320	L9	3821	J4	9023	I13		
2137	H13	3004	D12	3321	I9	3824	K6	9024	D2		
2200	L3	3005	D13	3322	K9	3825	D11	9025	E6		
2201	K4	3006	D12	3323	J9	3826	D12	9026	E6		
2202	I5	3007	D12	3324	L9	3828	I6	9027	F5		
2203	J6	3008	D12	3325	I9	3829	I6	9028	E5		
2204	J5	3009	D11	3326	L11	3834	H8	9029	E5		
2210	L2	3025	G8	3327	I11	3835	C4	9030	E5		
2211	I3	3026	G8	3328	L11	3836	C2	9031	E10		
2212	I3	3027	D9	3329	I11	3837	K14	9032	D6		
2213	M3	3029	D8	3330	L10	3838	K11	9033	B2		
2214	K2	3030	E7	3331	I10	3999	E14	9034	E4		
2215	K2	3031	F9	3340	L9	5211	L3	9035	E4		
2218	L2	3032	D7	3341	I9	5300	K10	9036	E4		
2250	K6	3033	E6	3342	L9	5301	I10	9037	G16		
2251	K6	3041	C8	3343	H9	6061	B6	9037	E4		
2252	K6	3042	B9	3344	K12	6062	B7	9038	E3		
2253	L4	3043	B9	3345	J12	6511	J17	9039	G5		
2254	L4	3044	C8	3346	K12	6512	J17	9040	F4		
2300	J7	3045	B9	3347	J12	6513	J18	9041	G5		
2302	K7	3046	B8	3348	K12	6514	J17	9042	G3		
2303	I7	3047	C6	3349	J12	6515	J18	9043	D8		
2304	K7	3048	C5	3350	K13	6516	J18	9044	K2		
2305	I7	3048	B6	3351	J13	6517	J18	9045	H5		
2306	K7	3049	C8	3352	K13	6518	J18	9046	E13		
2307	I7	3061	B8	3353	J13	6521	E16	9047	F2		
2308	L8	3062	C7	3356	L9	6522	M18	9048	G4		
2309	I8	3063	B6	3357	L13	6541	H18	9049	G4		
2310	K8	3064	B5	3358	M10	6543	H18	9050	H7		
2311	J8	3065	C6	3359	M10	6544	H18	9051	G6		
2312	K8	3066	C8	3360	L7	6561	I16	9052	K15		
2313	J8	3067	C7	3361	L7	6562	I16	9053	J7		
2314	K8	3071	E6	3362	L6	6563	I17	9054	J3		
2316	K8	3072	D11	3363	L7	6564	H17	9055	K3		
2316	I8	3074	E4	3366	K13	6565	I17	9056	L6		
2317	I8	3081	C10	3367	L13	6566	I17	9057	L6		
2318	J9	3082	B11	3368	J14	6567	I16	9058	L6		
2319	K9	3083	C9	3369	J14	6568	H17	9060	E18		
2320	K11	3088	C8	3370	K13	6721	B2	9061	I6		
2321	I10	3089	C7	3371	J13	7001	C12	9063	M7		
2322	K11	3094	E8	3520	E18	7002	F8	9065	L3		
2323	J10	3100	G6	3521	E16	7003	B7	9071	K18		
2324	K11	3101	H6	3522	F18	7004	B9	9074	D10		
2325	J11	3102	G6	3523	E16	7005	D6	9074	L14		
2326	J9	3105	H5	3524	F18	7100	H4	9075	D10		
2327	K9	3106	G5	3525	E16	7101	F5	9075	L14		
2340	K10	3107	G5	3526	D13	7102	H3	9077	B12		

MAIN PANEL SOLDER SIDE CD951



1001 | CDM
1 = GND
2 = S
3 = D4
4 = D3
5 = D1
6 = D2
7 = GND
8 = LM
9 = LO
10 = GND
11 = FOC−
12 = FOC+
13 = RAD+
14 = RAD−

1101 | CDM MOTOR
1 = VC
2 = GND

1601 | TRAY MOTOR
1 = TRAY
2 = GND

1511 | POWER SUPPLY
1 = AFC1
2 = AFC2
3 = VFTD
4 = AC1
5 = GND
6 = AC2
7 = AC3
8 = AC4

1702 | CONTROL & DISPLAY OUT
1 = +5V
2 = STB2
3 = DATA IN
4 = DATA OUT
5 = ACK
6 = CLK
7 = SDIS
8 = DISRES
9 = IR
10 = GND
11 = VFTD
12 = ACF1
13 = ACF2
14 = LED
15 = GND

1701 | TRAY SWITCH
1 = SIN1
2 = GND

1302 | HEADPHONE OUT
1 = LHP
2 = GND
3 = GND
4 = RHP
5 = −15V
6 = +15V
7 = KILL

3104 113 3083 A-CU
9349

1001	A9
1101	C13
1200	L19
1201	L18
1250	L18
1301	L10
1302	L14
1511	I4
1530	M5
1601	D5
1700	D20
1701	C16
1702	A17
1704	L7
1705	L8
1731	B20
2000	C9
2001	C9
2003	C9
2006	C10
2007	C10
2008	D9
2009	D9
2010	C9
2011	D9
2012	G12
2013	B12
2014	D9
2015	F13
2021	E13
2022	E14
2023	F15
2025	E14
2026	F14
2027	F14
2028	E14
2029	E12
2030	F14
2031	G14
2041	C13
2042	B13
2043	B13
2044	B16
2061	C16
2062	B16
2063	B15
2064	B15
2066	B14
2071	D15
2081	C12
2082	B12
2088	D14
2100	H15
2101	H15
2102	G17
2103	G16
2104	H16
2105	H16
2107	H16
2108	G19
2109	H19
2131	H8
2132	G7
2133	G7
2134	H7
2135	H7
2136	H8
2137	H8
2200	L18
2201	K17
2202	I16
2203	J15
2204	J16
2205	J15
2211	I18
2212	I19
2213	M18
2214	K19
2215	K19
2216	J20
2217	L18
2218	L19
2219	L19
2250	K15
2251	K15
2252	K15
2253	L17
2254	L17
2256	L16
2300	J14
2302	K14
2303	I14
2304	K14
2305	J14
2306	K14
2307	J14
2308	L13
2309	I13
2310	K14
2311	J14
2312	K13
2313	J13
2314	K13
2315	I13
2316	K13
2317	I13
2318	J12
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2320	L10
2321	I11
2322	K10
2323	J11
2324	K10
2325	J10
2326	J13
2327	K13
2340	K11
2341	I11
2342	K12
2343	J12
2344	J12
2345	J12
2346	K11
2347	J11
2348	K10
2349	I10
2350	L10
2351	M9
2352	M15
2353	M15
2511	J5
2512	J5
2513	J4
2514	J4
2515	J4
2516	J3
2517	J3
2518	J3
2520	K5
2523	L3
2525	K6
2526	L6
2527	L6
2528	L6
2530	L5
2531	L5
2532	K4
2533	K4
2534	L4
2535	L5
2536	K3
2537	L3
2538	L4
2539	L4
2540	F3
2542	I3
2543	I3
2544	H3
2545	H3
2546	H3
2547	H3
2548	G4
2549	G4
2561	H6
2562	I5
2563	I5
2601	F4
2602	F4
2603	F3
2604	F3
2605	G4
2704	D19
2705	G5
2706	H5
2707	G5
2708	H5
2733	B20
2751	C17
2761	J6
2762	M9
2763	M7
3000	C9
3001	C9
3002	E10
3003	E10
3004	D9
3005	D9
3006	D9
3007	D10
3008	D10
3009	D10
3025	G13
3026	G13
3027	D13
3029	D13
3030	E14
3030	E16
3031	F13
3032	D15
3033	E16
3041	C13
3042	B13
3043	B13
3044	C14
3045	B13
3046	B13
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3062	C14
3063	B16
3064	B16
3065	C15
3066	C14
3067	C14
3069	E16
3070	E15
3071	E15
3072	D10
3074	E17
3081	C11
3082	B10
3083	C12
3094	D14
3100	G15
3101	H15
3102	G16
3105	H16
3106	G17
3107	G16
3108	F17
3109	F18
3110	I17
3111	I17
3112	I17
3113	I17
3114	J18
3115	J18
3116	F19
3131	G9
3132	G9
3133	I7
3134	H8
3135	G6
3136	G7
3137	G7
3138	G8
3139	G8
3140	E7
3141	E7
3142	G6
3143	E7
3144	G8
3145	G9
3146	G9
3147	H9
3148	G10
3149	G6
3150	G8
3151	H7
3201	J15
3211	J18
3212	K19
3213	L19
3214	F19
3215	E20
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3217	K19
3218	M19
3219	F19
3221	J18
3222	K18
3223	K18
3224	K18
3225	K18
3226	J20
3227	J15
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3251	K17
3252	K17
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3255	K16
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3303	I14
3304	L14
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3326	K11
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3349	J9
3350	K8
3351	I9
3352	J8
3353	I8
3356	L12
3357	L8
3358	M12
3359	M12
3360	L15
3361	L15
3362	L15
3363	L15
3366	K8
3367	K8
3368	J7
3370	J8
3371	J8
3520	E3
3521	E5
3522	F3
3523	E5
3524	F3
3525	E5
3526	D8
3527	D9
3528	E9
3529	G10
3530	M5
3531	L5
3541	H4
3561	I6
3562	I6
3563	I6
3564	H6
3565	I6
3566	J7
3567	H6
3569	J7
3600	F5
3602	F5
3603	F5
3604	F5
3605	E4
3606	G3
3607	G3
3608	F5
3701	D19
3702	G6
3703	C18
3705	C18
3708	C18
3711	C15
3721	A19
3722	B19
3723	B20
3731	B19
3732	M7
3734	C19
3735	B19
3736	B18
3741	B17
3742	B16
3747	C20
3748	B18
3749	B16
3750	C18
3751	C17
3752	C17
3761	J6
3762	J6
3763	J6
3764	J7
3765	J6
3766	J6
3767	G11
3768	B19
3800	A16
3801	B10
3802	E19
3803	D19
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3808	I16
3809	D13
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3813	D16
3814	D16
3815	D16
3816	M11
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3818	C9
3819	J16
3820	H18
3821	J17
3824	K16
3825	D10
3826	D9
3828	I15
3829	I15
3834	H13
3835	C17
3837	J7
3838	K10
3999	E7
5211	L18
5300	K11
5301	I11
6061	B15
6062	B15
6511	J4
6512	J5
6513	J4
6514	J4
6515	J4
6516	J3
6517	J3
6518	J3
6521	E5
6522	M3
6541	H3
6543	H3
6544	H4.
6561	I6
6562	I6
6563	I4
6564	H4
6565	I4
6566	I4
6567	I6
6568	H4
6700	K7
6721	B20
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7002	F14
7003	B15
7004	B12
7005	D15
7088	E15
7100	H17
7101	F16
7102	H18
7131	H7
7132	E8
7133	E8
7134	G9
7135	G6
7136	H6
7201	K18
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7203	J16
7204	J17
7211	I19
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7213	J19
7250	K16
7300	J13
7302	K12
7303	I12
7304	K9
7305	I9
7306	K9
7307	I9
7308	L15
7309	M13
7310	J7
7311	J8
7312	M12
7313	M11
7314	J9
7315	J9
7522	L6
7526	L6
7527	L4
7528	L3
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7530	E9
7531	L6
7541	G3
7561	I6
7562	I6
7600	F4
7701	D18
7702	G5
7721	A19
7731	C18
7732	B19
7733	B18
7751	C16
7761	K7
7762	J6
7763	F11
9000	J5
9002	F17
9003	A17
9004	D11
9005	B16
9006	C15
9008	B8
9009	K15
9010	B9
9011	B9
9012	E11
9013	C15
9015	B19
9016	D16
9017	H4
9018	C16
9019	C16
9021	D16
9022	E16
9023	H10
9024	D20
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9036	E18
9037	E18
9038	E18
9039	G17
9040	F17
9041	G16
9042	G18
9043	D14
9044	K20
9045	H16
9046	E9
9047	F19
9048	G17
9049	G18
9050	H14
9051	G15
9052	K6
9053	J15
9054	J19
9055	K19
9056	L16
9057	L16
9058	L15
9060	E3
9061	I15
9062	L15
9063	M14
9064	C17
9065	L18
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9067	F15
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9075	L7
9077	B10
9078	L10
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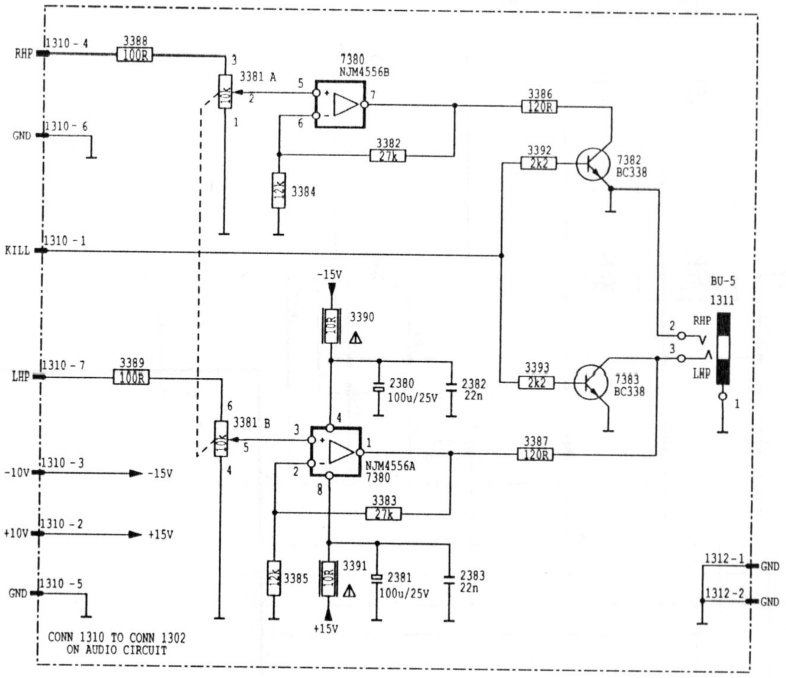
9083	K8
9084	K8
9087	L11
9088	K4
9089	G4
9090	J4
9091	K4
9092	J5
9093	K5
9094	B10
9095	E12
9096	G12
9097	H13
9098	I7
9100	L10
9101	G11
9102	G6
9104	L7
9105	L6
9106	G12
9109	L5
9110	G18
9111	G10
9112	E11
9113	E11
9114	E11
9115	B9
9120	E15
9122	F12
9124	E12
9125	E12
9126	B11
9127	B11
9128	B11
9129	D11
9132	G11

VARIABLE HEADPHONE CIRCUIT DIAGRAM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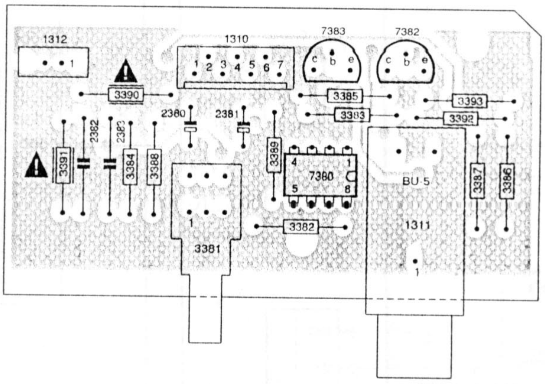
1310 - 4
3388
100R
3
3381 A
2
1
10K
7380
NJM4556B
5
6
7
3386
120R
GND
1310 - 6
3382
27k
3392
2k2
7382
BC338
12k
3384
KILL
1310 - 1
-15V
3390
10R
BU-5
1311
2
RHP
3
LHP
1
LHP
1310 - 7
3389
100R
2380
100u/25V
2382
22n
3393
2k2
7383
BC338
6
3381 B
10K
5
4
3
4
1
NJM4556A
7380
2
8
3387
120R
-10V
1310 - 3
-15V
+10V
1310 - 2
+15V
3383
27k
12k
3385
3391
10R
2381
100u/25V
2383
22n
+15V
GND
1310 - 5
1312-1
GND
1312-2
GND
CONN 1310 TO CONN 1302
ON AUDIO CIRCUIT

3104 118 00651S-B
9210

VARIABLE HEADPHONE PANEL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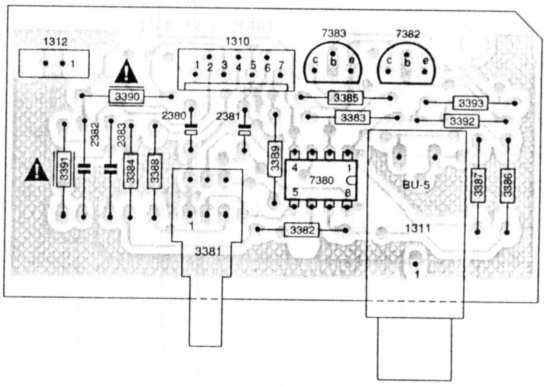
1
1310
1 2 3 4 5 6 7
7383
7382
c b e
c b e
3390
3385
3383
3393
3392
2380
2381
2382
2383
3391
3384
3388
3389
4
1
5
8
7380
BU-5
3387
3386
3382
1311
1
3381
1

3104 113 3009 C-COMP
9211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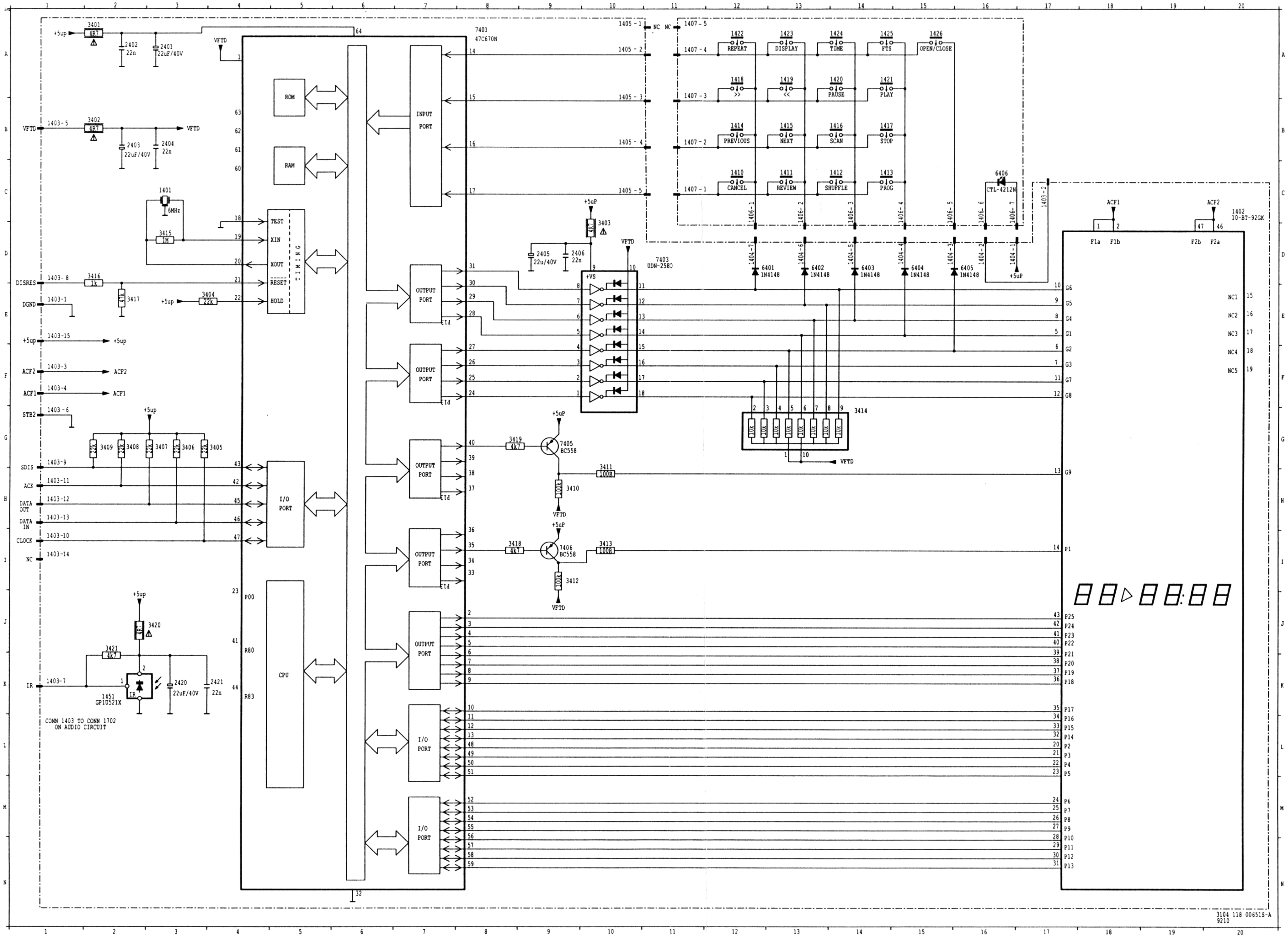
1310
1 2 3 4 5 6 7
7383
7382
c b e
c b e
3390
3385
3383
3393
3392
2380
2381
2382
2383
3391
3384
3388
3389
4
1
5
8
7380
BU-5
3387
3386
3382
1311
1
3381
1

3104 113 3009 C-COMP
9211

CONTROL & DISPLAY CIRCUIT DIAGRAM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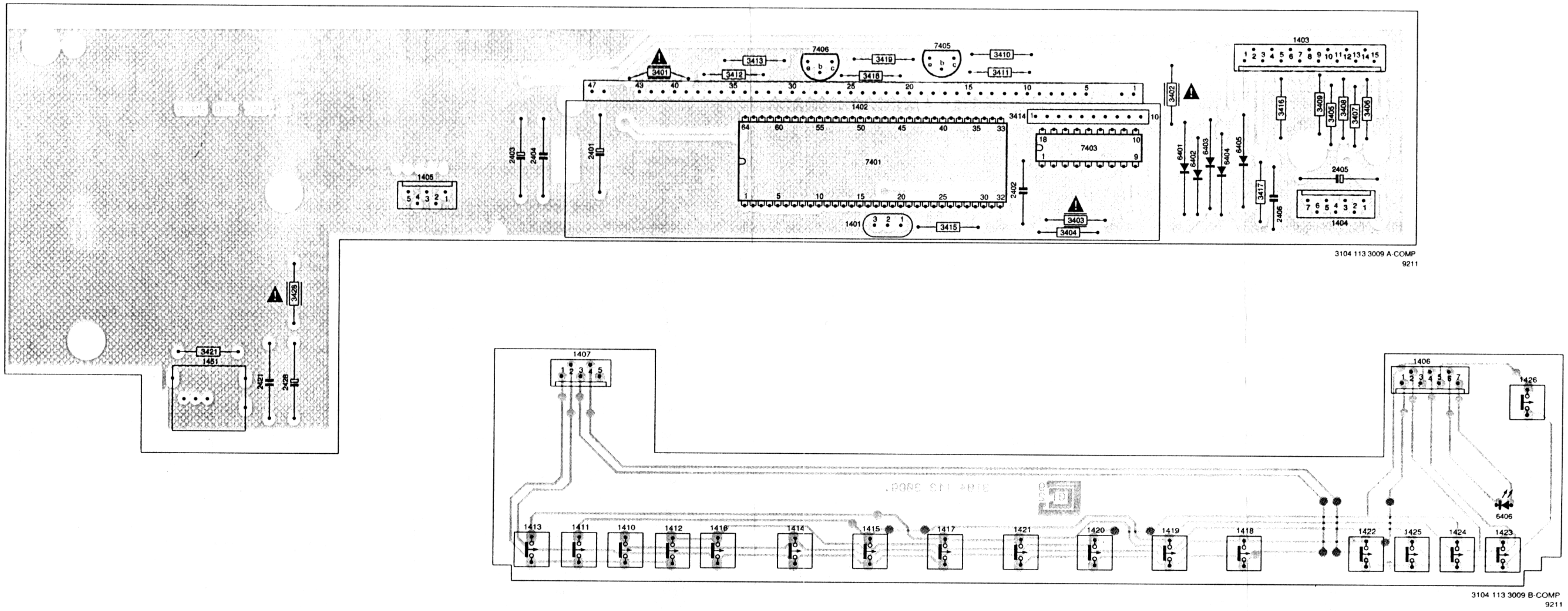
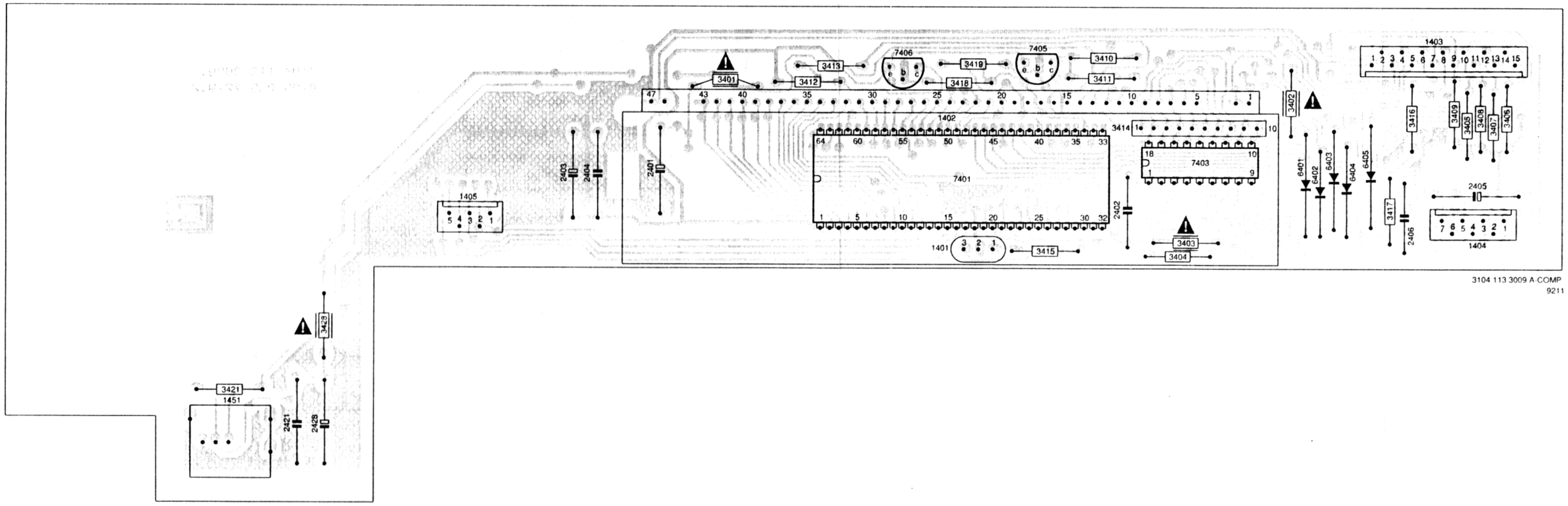
47C670N
ROM
RAM
INPUT PORT
OUTPUT PORT
I/O PORT
CPU
TIMING
TEST
XIN
XOUT
RESET
HOLD
P00
R80
R83
1401
6MHz
3415
1M
3416
1k
3417
47K
3404
22k
3401
4R7
3402
4R7
2401
22uF/40V
2402
22n
2403
22uF/40V
2404
22n
+5up
VFTD
DISRES
DGND
ACF2
ACF1
STB2
SDIS
ACK
DATA OUT
DATA IN
CLOCK
NC
IR
1403-1
1403-3
1403-4
1403-5
1403-6
1403-7
1403-8
1403-9
1403-10
1403-11
1403-12
1403-13
1403-14
1403-15
3405
3406
3407
3408
3409
22k
3420
4R7
3421
4k7
1451
GP1U521X
2420
22uF/40V
2421
22n
CONN 1403 TO CONN 1702
ON AUDIO CIRCUIT
1405 - 1
1405 - 2
1405 - 3
1405 - 4
1405 - 5
1407 - 1
1407 - 2
1407 - 3
1407 - 4
1407 - 5
NC
1422
REPEAT
1423
DISPLAY
1424
TIME
1425
FTS
1426
OPEN/CLOSE
1418
>>
1419
<<
1420
PAUSE
1421
PLAY
1414
PREVIOUS
1415
NEXT
1416
SCAN
1417
STOP
1410
CANCEL
1411
REVIEW
1412
SHUFFLE
1413
PROG
1406-1
1406-2
1406-3
1406-4
1406-5
1406-6
1406-7
1404-1
1404-2
1404-3
1404-4
1404-5
1404-6
1404-7
1403-2
6406
CTL-4212N
6401
6402
6403
6404
6405
1N4148
3403
4R7
2405
22u/40V
2406
22n
7403
UDN-2583
+VS
3414
10K
7405
BC558
7406
BC558
3419
4k7
3418
4k7
3411
100R
3413
100R
3410
100K
3412
100K
1402
10-BT-92GK
F1a
F1b
F2b
F2a
G1
G2
G3
G4
G5
G6
G7
G8
G9
P1
NC1
NC2
NC3
NC4
NC5
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22
P23
P24
P25
3104 118 00651S-A
9210

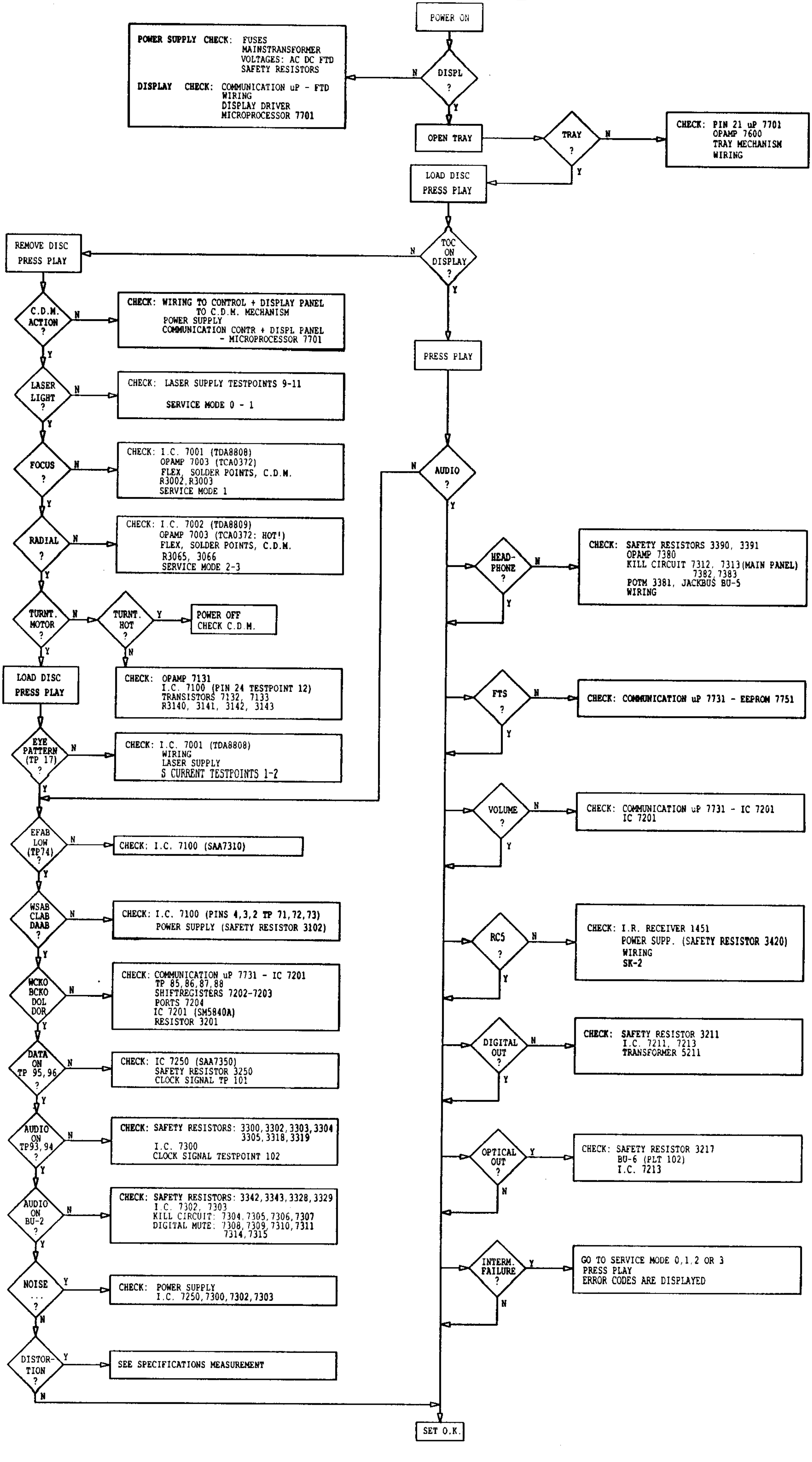
1401	C 3
1402	C20
1403	K 1
1403	I 1
1403	I 1
1403	H 1
1403	H 1
1403	H 1
1403	G 1
1403	G 1
1403	F 1
1403	F 1
1403	E 1
1403	E 1
1403	D 1
1403	B 1
1403	C17
1404	D12
1404	D13
1404	D14
1404	D15
1404	D15
1404	D16
1404	D16
1405	A10
1405	C10
1405	B10
1405	A10
1405	A10
1406	C12
1406	C13
1406	C14
1406	C15
1406	C15
1406	C16
1406	C16
1407	C11
1407	B11
1407	A11
1407	A11
1407	A11
1410	C12
1411	C13
1412	C14
1413	C14
1414	B12
1415	B13
1416	B14
1417	B14
1418	A12
1419	A13
1420	A14
1421	A14
1422	A12
1423	A13
1424	A14
1425	A14
1426	A15
1451	K 2
2401	A 3
2402	A 2
2403	B 2
2404	B 3
2405	D 9
2406	D 9
2420	K 3
2421	K 4
3401	A 2
3402	B 2
3403	D10
3404	E 4
3405	G 4
3406	G 3
3407	G 3
3408	G 2
3409	G 2
3410	H 9
3411	H10
3412	I 9
3413	I10
3414	F14
3415	D 3
3416	D 2
3417	E 2
3418	I 8
3419	G 8
3420	J 3
3421	J 2
6401	D13
6402	D13
6403	D14
6404	D15
6405	D16
6406	C16
7401	A 8
7403	D11
7405	G 9
7406	I 9

DISPLAY PANEL **KEYBOARD PANEL**


1403
1402
1405
1451
7401
7403
7405
7406
3401
3402
3403
3404
3410
3411
3412
3413
3414
3415
3416
3417
3418
3419
3421
3428
2401
2402
2403
2404
2405
2406
2421
2428
6401
6402
6403
6404
6405
1401
1404
3104 113 3009 A-COMP
9211
1407
1406
1426
6406
1413
1411
1410
1412
1416
1414
1415
1417
1421
1420
1419
1418
1422
1425
1424
1423
3104 113 3009 B-COMP
9211

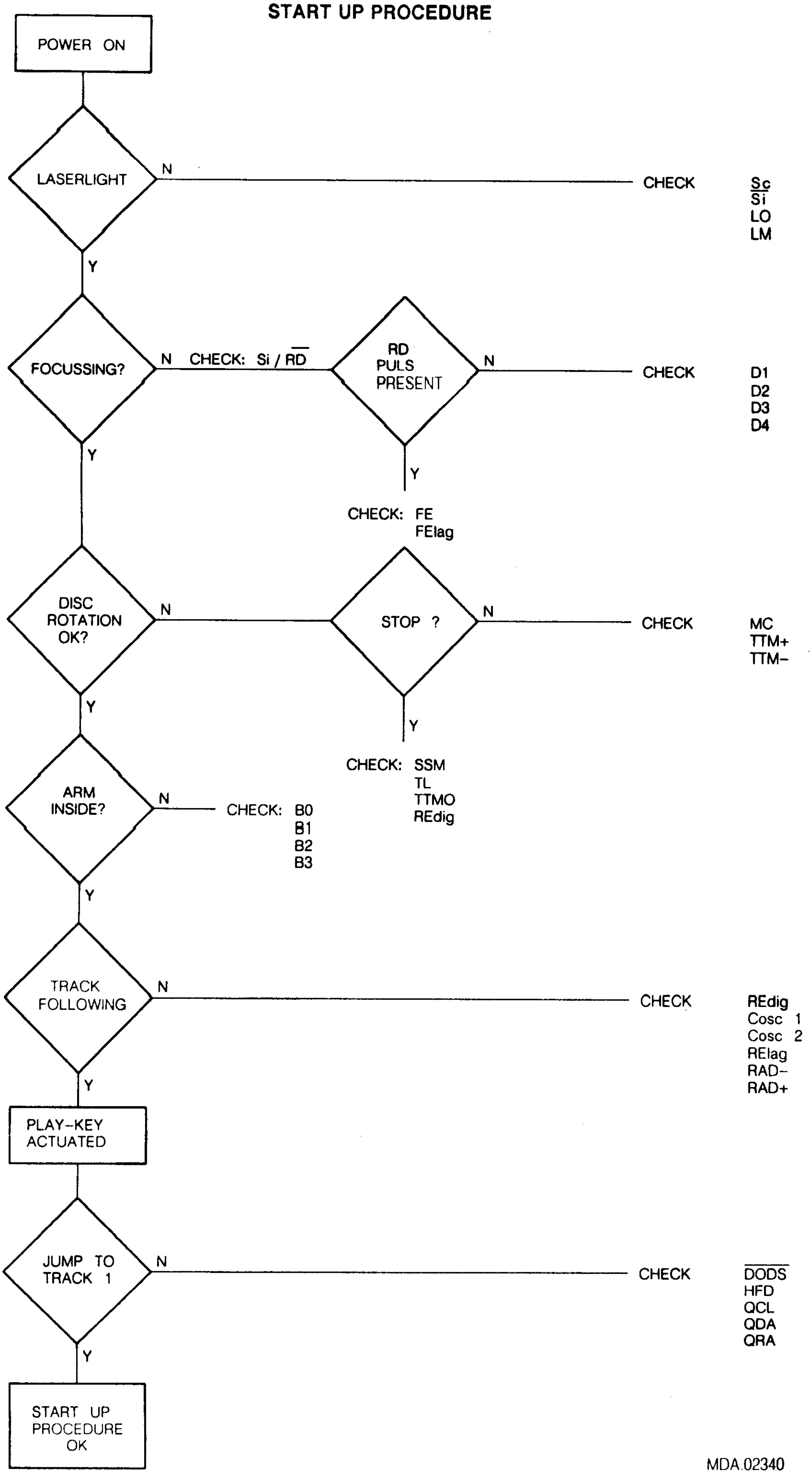

1403
1402
1405
1451
7401
7403
7405
7406
3401
3402
3403
3404
3410
3411
3412
3413
3414
3415
3416
3417
3418
3419
3421
3428
2401
2402
2403
2404
2405
2406
2421
2428
6401
6402
6403
6404
6405
1401
1404
3104 113 3009 A-COMP
9211

FAULT FINDING GUIDE


POWER ON
DISPL ?
POWER SUPPLY CHECK: FUSES
MAINSTRANSFORMER
VOLTAGES: AC DC FTD
SAFETY RESISTORS
DISPLAY CHECK: COMMUNICATION uP - FTD
WIRING
DISPLAY DRIVER
MICROPROCESSOR 7701
OPEN TRAY
TRAY ?
CHECK: PIN 21 uP 7701
OPAMP 7600
TRAY MECHANISM
WIRING
LOAD DISC
PRESS PLAY
TOC ON DISPLAY ?
REMOVE DISC
PRESS PLAY
C.D.M. ACTION ?
CHECK: WIRING TO CONTROL + DISPLAY PANEL
TO C.D.M. MECHANISM
POWER SUPPLY
COMMUNICATION CONTR + DISPL PANEL
- MICROPROCESSOR 7701
LASER LIGHT ?
CHECK: LASER SUPPLY TESTPOINTS 9-11
SERVICE MODE 0 - 1
FOCUS ?
CHECK: I.C. 7001 (TDA8808)
OPAMP 7003 (TCA0372)
FLEX, SOLDER POINTS, C.D.M.
R3002, R3003
SERVICE MODE 1
RADIAL ?
CHECK: I.C. 7002 (TDA8809)
OPAMP 7003 (TCA0372: HOT!)
FLEX, SOLDER POINTS, C.D.M.
R3065, 3066
SERVICE MODE 2-3
TURNT. MOTOR ?
TURNT. HOT ?
POWER OFF
CHECK C.D.M.
CHECK: OPAMP 7131
I.C. 7100 (PIN 24 TESTPOINT 12)
TRANSISTORS 7132, 7133
R3140, 3141, 3142, 3143
LOAD DISC
PRESS PLAY
EYE PATTERN (TP 17) ?
CHECK: I.C. 7001 (TDA8808)
WIRING
LASER SUPPLY
S CURRENT TESTPOINTS 1-2
EFAB LOW (TP74) ?
CHECK: I.C. 7100 (SAA7310)
WSAB CLAB DAAB ?
CHECK: I.C. 7100 (PINS 4,3,2 TP 71,72,73)
POWER SUPPLY (SAFETY RESISTOR 3102)
WCKO BCKO DOL DOR
CHECK: COMMUNICATION uP 7731 - IC 7201
TP 85, 86, 87, 88
SHIFTREGISTERS 7202-7203
PORTS 7204
IC 7201 (SM5840A)
RESISTOR 3201
DATA ON TP 95, 96 ?
CHECK: IC 7250 (SAA7350)
SAFETY RESISTOR 3250
CLOCK SIGNAL TP 101
AUDIO ON TP93, 94 ?
CHECK: SAFETY RESISTORS: 3300, 3302, 3303, 3304
3305, 3318, 3319
I.C. 7300
CLOCK SIGNAL TESTPOINT 102
AUDIO ON BU-2 ?
CHECK: SAFETY RESISTORS: 3342, 3343, 3328, 3329
I.C. 7302, 7303
KILL CIRCUIT: 7304, 7305, 7306, 7307
DIGITAL MUTE: 7308, 7309, 7310, 7311
7314, 7315
NOISE ... ?
CHECK: POWER SUPPLY
I.C. 7250, 7300, 7302, 7303
DISTOR-TION ?
SEE SPECIFICATIONS MEASUREMENT
PRESS PLAY
AUDIO ?
HEAD-PHONE ?
CHECK: SAFETY RESISTORS 3390, 3391
OPAMP 7380
KILL CIRCUIT 7312, 7313 (MAIN PANEL)
7382, 7383
POTM 3381, JACKBUS BU-5
WIRING
FTS ?
CHECK: COMMUNICATION uP 7731 - EEPROM 7751
VOLUME ?
CHECK: COMMUNICATION uP 7731 - IC 7201
IC 7201
RC5 ?
CHECK: I.R. RECEIVER 1451
POWER SUPP. (SAFETY RESISTOR 3420)
WIRING
SK-2
DIGITAL OUT ?
CHECK: SAFETY RESISTOR 3211
I.C. 7211, 7213
TRANSFORMER 5211
OPTICAL OUT ?
CHECK: SAFETY RESISTOR 3217
BU-6 (PLT 102)
I.C. 7213
INTERM. FAILURE ?
GO TO SERVICE MODE 0, 1, 2 OR 3
PRESS PLAY
ERROR CODES ARE DISPLAYED
SET O.K.
Y
N

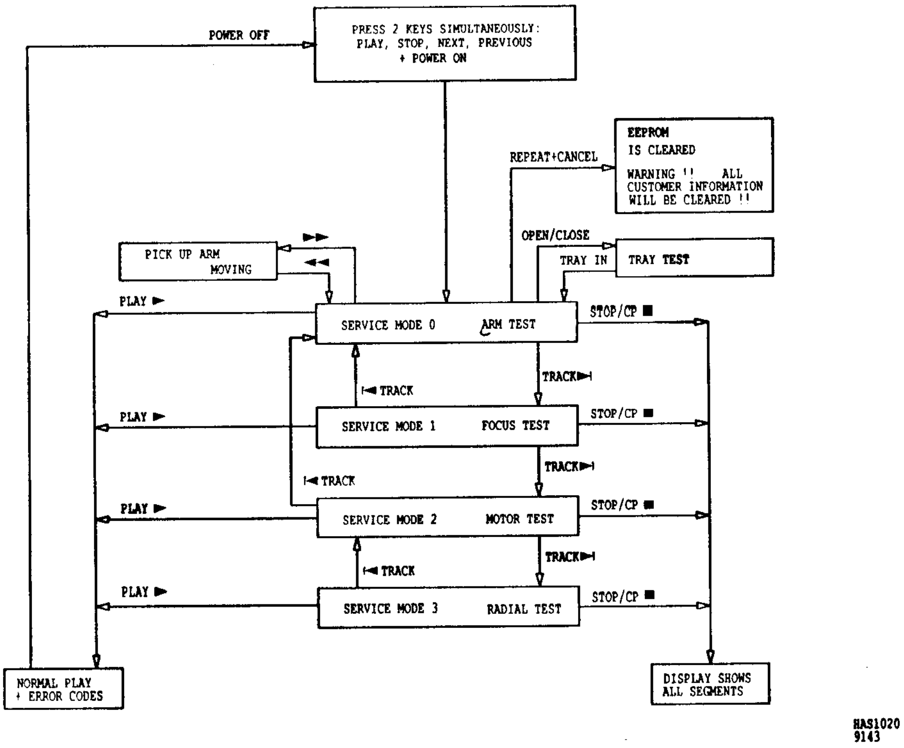
HAS1049
9212

START UP PROCEDURE


POWER ON
LASERLIGHT
N
CHECK
Sc
$\overline{\text{Si}}$
LO
LM
Y
FOCUSSING?
N
CHECK: Si / $\overline{\text{RD}}$
RD PULS PRESENT
N
CHECK
D1
D2
D3
D4
Y
Y
CHECK: FE
FElag
DISC ROTATION OK?
N
STOP ?
N
CHECK
MC
TTM+
TTM−
Y
Y
CHECK: SSM
TL
TTMO
REdig
ARM INSIDE?
N
CHECK: B0
B1
B2
B3
Y
TRACK FOLLOWING
N
CHECK
REdig
Cosc 1
Cosc 2
RElag
RAD−
RAD+
Y
PLAY-KEY ACTUATED
JUMP TO TRACK 1
N
CHECK
$\overline{\text{DODS}}$
HFD
QCL
QDA
QRA
Y
START UP PROCEDURE OK

MDA.02340
T07-941

SERVICE TEST PROGRAM


POWER OFF
PRESS 2 KEYS SIMULTANEOUSLY: PLAY, STOP, NEXT, PREVIOUS + POWER ON
REPEAT+CANCEL
EEPROM IS CLEARED
WARNING !! ALL CUSTOMER INFORMATION WILL BE CLEARED !!
OPEN/CLOSE
TRAY IN
TRAY TEST
►►
◄◄
PICK UP ARM MOVING
PLAY ►
SERVICE MODE 0 ARM TEST
STOP/CP ■
TRACK►►|
|◄◄ TRACK
PLAY ►
SERVICE MODE 1 FOCUS TEST
STOP/CP ■
TRACK►►|
|◄◄ TRACK
PLAY ►
SERVICE MODE 2 MOTOR TEST
STOP/CP ■
TRACK►►|
|◄◄ TRACK
PLAY ►
SERVICE MODE 3 RADIAL TEST
STOP/CP ■
NORMAL PLAY + ERROR CODES
DISPLAY SHOWS ALL SEGMENTS
HAS1020
9143

ERROR CODE TABLE

SYSTEM ERRORS

ER02	Focus error
ER03	Radial error
ER04	Too many TL
ER05	TL low to long
ER06	Jump error
ER07	Subcode error
ER08	TOC error
ER60	EEPROM error during initialisation
ER61	EEPROM error during read or write
ER67	No or bad communication between SERVO and USER μP

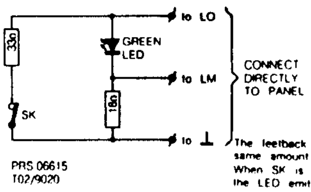
CHECK OF THE PHOTODIODES

Step	Signal	Mode	◇	∅			Remarks
1	D2 D1 D3 D4	power on	◇4—⊥ ◇6—⊥ ◇7—⊥ ◇8—⊥	–	–	signal 4⁝6⁝7⁝8	Signal depends on Distance lens ↔ IR LED of remote control

T-23366A

CHECK OF LASER SUPPLY

The laser, the lasersupply plus the monitor diode form a feedback system.
A defect in the lasersupply may result in the destruction of the laser. If, in that case, the laser is replaced;(= complete C.D.M.-unit) the new laser will also become defective. However, it is impossible to check and repair a feedback system if a link is missing. For this reason the laser supply can be checked with teh replacement circuit for laser assembly.

Step	Signal	Mode	◇		Remarks
1	LO	serv. pos. 2 SK ⁄∘	◇9—(V)—⊥	1.8<V <2.3	REPLACEMENT CIRCUIT FOR LASER ASSEMBLY  to LO 33Ω GREEN LED to LM CONNECT DIRECTLY TO PANEL 18Ω SK to ⊥ PRS 06615 T02/9020 The feetback system sees to it that the same amount of current flows through the LED When SK is open and when SK is closed the LED emits little light
	LM		◇11—(V)—⊥	170<mV <220	
2	LO	serv. pos. 2 SK •‾•	◇9—(V)—⊥	1.8<V <2.3	
	LM		◇11—(V)—⊥	170<mV <220	
3	LO	Power on	◇9—(V)—⊥	0V ± 0.2V	No light

After opening SK, the led will emit more light for a short moment.

T-23366B

CHECK OF CDM9

Step	Signal	Mode	◇	(V)
1	S current = voltage across R3000	Test disc 5A play	◇1—(V)—◇2 mV DC	56<mV<76

WARNINGS

1. Never disconnect flex when power is on.
2. Laser power is adjusted during the production process and may not be readjusted.

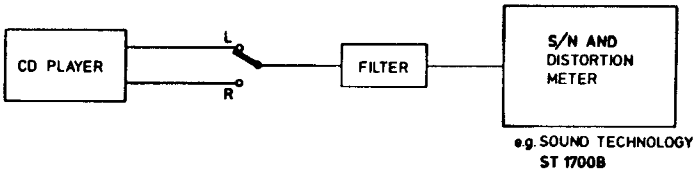
SPE
Si
Bl
Bl
Bl
BL
Filter
CD P

SPECIFICATIONS MEASUREMENT

Signal	Mode	◇			Remarks
BU2-L	Test disc 3, play, total harmonic distorsion	filter output	See technial data		See drawing 30459A12
BU2-R	Test disc 3, play, total harmonic distorsion	filter output	See technial data		See drawing 30459A12
BU2-L	Test disc 3, play signal-to-noise ratio	filter output	See technial data		See drawing 30459A12
BU2-R	Test disc 3, play signal-to-noise ratio	filter output	See technial data		See drawing 30459A12

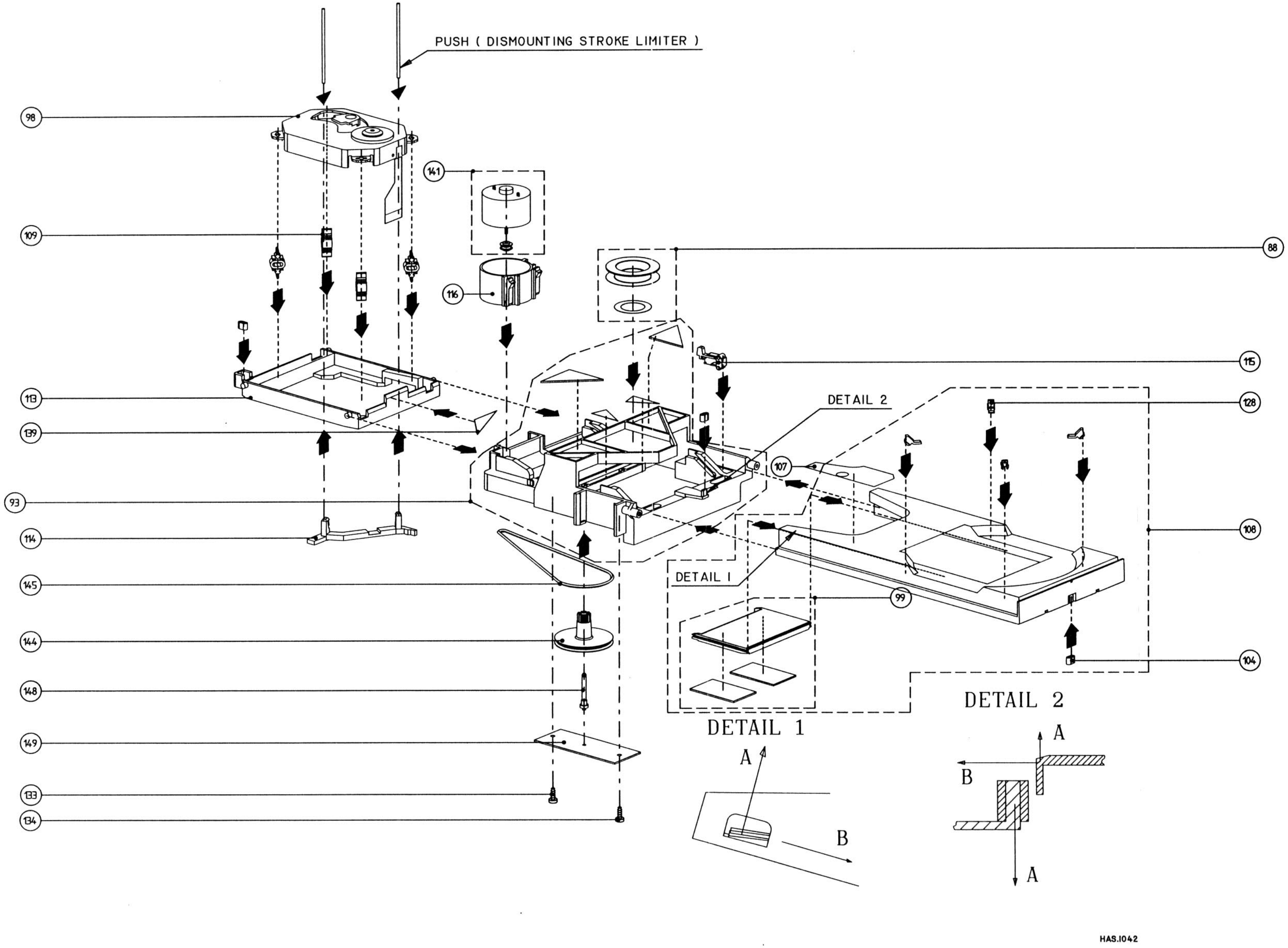
T-23366M

Filter = 13th order filter 4822 395 30204


CD PLAYER
L
R
FILTER
S/N AND DISTORTION METER
e.g. SOUND TECHNOLOGY ST 1700B

30 459 A12

LOADER


PUSH (DISMOUNTING STROKE LIMITER)
DETAIL 2
DETAIL 1
DETAIL 2
DETAIL 1
A
A
B
B
B
A
HAS.1042

MECHANICAL PARTSLIST

Cabinet

1⚠	4822 444 40551	ALU FRONT
13⚠	4822 444 40549	FRONT
15	4822 410 61885	KNOB UNIT(NOSE)
23	4822 450 61891	IR-WINDOW
24	4822 380 20425	REFLECTOR
52	4822 535 93283	POWER ROD
53	4822 410 61705	KNOB
54	4822 462 71808	CAP
57	4822 454 12828	BITSTREAM LOGO
60	4822 444 60815	COVER PLATE
71	4822 444 40552	ALU TRAY FRONT
151	4822 444 60837	COVER
251	4822 462 41888	FOOT
255	4822 462 41887	FELT
283⚠	4822 532 60948	BUSHING
300⚠	4822 321 10791	MAINS FLEX /00S
301⚠	4822 321 10823	MAINS FLEX /05S
302⚠	4822 321 10825	MAINS FLEX /17S
303⚠	4822 321 10828	MAINS FLEX /10S
308	4822 321 23116	CINCH CABLE
314	4822 321 61452	CABLE DIGITAL OUT
340	4822 736 21416	INSTRUCTION FOR USE CD950/17S
340	4822 736 21413	INSTRUCTION FOR USE CD950
365	4822 218 10459	REMOTE CONTROL RD6910/00

Loader

88	4822 402 61406	CLAMPING PIECE
93	4822 464 50886	FRAME
98	4822 691 30275	CDM-9
99	4822 444 60808	COVER PLATE
104	4822 325 60379	DAMPING GROMMET
108	4822 444 30441	TRAY
109	4822 466 93065	SUSPENSION
113	4822 464 50884	CHASSIS
114	4822 466 93066	STROKE LIMITER
115	4822 276 13222	SWITCH
116	4822 464 50885	MOTOR FRAME
128	4822 460 20801	ORNAMENTAL PROFILE
141	4822 361 21423	MOTOR
144	4822 522 33192	GEAR WHEEL
145	4822 358 10115	BELT

The following parts are only available during production period on special request.

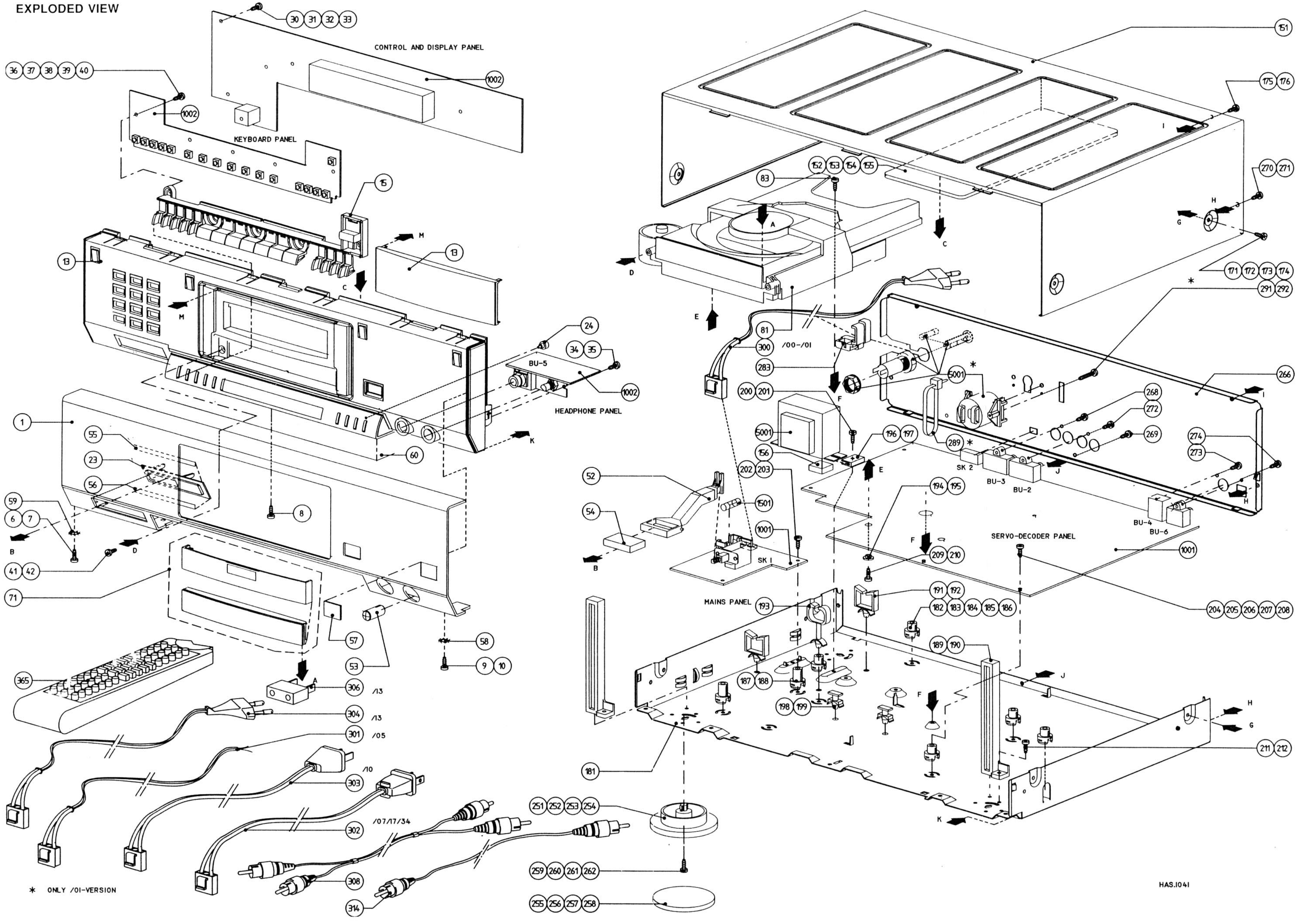
181	Frame
189,190	Support bracket
266	Back plate

SCREWS

Taptite M3x6: 83
211,212
Taptite M3x10: 6,7,8,9,10
171,172,173,174
175,176
200,201
204,205,206,207,208
259,260,261,262
269,270,271
Taptite M3x15: 202,203

Plastite M3x10: 30,31,32,33
34,35
36,37,38,39,40
41,42
209,210
268
272
273
274
Plastite M3x16: 30,31,32,33
43

EXPLODED VIEW


CONTROL AND DISPLAY PANEL
KEYBOARD PANEL
HEADPHONE PANEL
BU-5
SERVO-DECODER PANEL
MAINS PANEL
SK 1
SK 2
BU-2
BU-3
BU-4
BU-6
/00-/01
/13
/05
/10
/07/17/34
A
B
C
D
E
F
G
H
I
J
K
M
*
30 31 32 33
36 37 38 39 40
1002
15
13
24
34 35
1
55
23
56
59
6 7
41 42
8
60
71
57
53
58
9 10
365
306
304
301
303
302
308
314
151
175 176
270 271
152 153 154 155
83
171 172 173 174
291 292
81
300
283
200 201
5001
156
196 197
202 203
52
54
1501
1001
266
268
272
269
274
273
289
194 195
209 210
204 205 206 207 208
191 192
182 183 184 185 186
193
189 190
187 188
198 199
181
211 212
251 252 253 254
259 260 261 262
255 256 257 258
HAS.1041

∗ ONLY /01-VERSION

MAIN PANEL

MISCELLANEOUS

⚠	4822 492 63076	CLAMPING SPRING
BU-2	4822 267 31485	ANALOG OUT SOCKET
BU-3	4822 267 31455	ESI IN/OUT SOCKET
BU-4	4822 267 31457	DIGITAL OUT SOCKET
BU-6	4822 218 21019	OPTICAL OUT
SK-2	4822 276 12339	SWITCH ESI ON/OFF
1101	4822 265 30525	RFK5 CONNECTOR
1302	4822 267 50621	CONNECTOR 7P
1702	4822 265 41115	CONNECTOR 15P
1530	4822 071 55001	FUSE 500MA

CRYSTAL

1250	4822 242 71349	CRYSTAL 11,2896 MHz
1700	4822 242 72527	RESONATOR 4 MHz
1731	4822 242 72527	RESONATOR 4 MHz

CAPACITORS

2000	4822 122 33809	22nF 20% 50V
2001	5322 122 32268	470pF 10% 50V
2003	4822 122 33496	100nF 10% 63V
2006	4822 122 33496	100nF 10% 63V
2007	4822 122 33175	2,2nF 20% 50V
2008	4822 122 32542	47nF 10% 63V
2009	5322 122 32531	100pF 5% 50V
2010	4822 122 33177	10nF 20% 50V
2011	5322 122 34123	1nF 10% 50V
2012	4822 121 42408	220nF 5% 63V
2013	4822 121 51252	470nF 5% 63V
2014	4822 122 32575	220pF 10% 500V
2015	5322 122 34123	1nF 10% 50V
2021	4822 121 51321	8,2μF 1% 63V
2022	4822 121 51321	8,2μF 1% 63V
2023	4822 124 40433	47μF 20% 25V
2025	5322 121 42661	330nF 5% 63V
2026	4822 122 33342	33nF 10% 63V
2027	4822 122 33342	33nF 10% 63V
2028	4822 121 42408	220nF 5% 63V
2029	4822 121 42408	220nF 5% 63V
2030	4822 122 33496	100nF 10% 63V
2031	4822 122 33496	100nF 10% 63V
2041	4822 121 51252	470nF 5% 63V
2042	5322 126 10223	4,7nF 10% 63V
2043	4822 121 42408	220nF 5% 63V
2044	4822 122 33496	100nF 10% 63V
2061	4822 121 51252	470nF 5% 63V
2062	4822 122 33496	100nF 10% 63V
2063	4822 122 33809	22nF 20% 50V
2064	4822 124 40272	33μF 20% 16V
2066	4822 124 40272	33μF 20% 16V
2071	4822 122 33496	100nF 10% 63V
2081	4822 122 32575	220pF 10% 500V
2082	4822 124 40433	47μF 20% 25V
2088	4822 121 43526	47nF 5% 100V
2100	5322 122 32452	47pF 5% 63V
2101	4822 122 33175	2,2nF 20% 50V
2102	4822 122 33809	22nF 20% 50V
2103	4822 124 40272	33μF 20% 16V
2104	4822 122 33809	22nF 20% 50V
2105	4822 121 51252	470nF 5% 63V
2107	4822 124 41576	2,2μF 20% 50V
2108	4822 124 40272	33μF 20% 16V
2109	4822 122 33809	22nF 20% 50V
2131	4822 122 33893	18nF 10% 63V
2132	5322 121 42661	330nF 5% 63V
2133	4822 122 33175	2,2nF 20% 50V
2134	4822 122 33809	22nF 20% 50V
2135	4822 124 40196	220μF 20% 16V
2136	4822 122 33809	22nF 20% 50V
2137	4822 124 40196	220μF 20% 16V
2200	5322 122 31863	330pF 5% 50V
2201	4822 122 33809	22nF 20% 50V
2202	4822 124 40272	33μF 20% 16V
2203	4822 122 33809	22nF 20% 50V
2204	4822 122 33809	22nF 20% 50V
2211	4822 124 40272	33μF 20% 16V
2212	4822 122 33809	22nF 20% 50V
2213	4822 122 33809	22nF 20% 50V
2214	4822 122 33496	100nF 10% 63V
2215	4822 122 33809	22nF 20% 50V
2218	4822 122 33809	22nF 20% 50V
2219	4822 124 40272	33μF 20% 16V
2250	4822 122 33496	100nF 10% 63V
2251	4822 124 40272	33μF 20% 16V
2252	4822 122 33496	100nF 10% 63V
2253	5322 122 32452	47pF 5% 63V
2254	5322 122 32452	47pF 5% 63V
2300	4822 122 33496	100nF 10% 63V
2302	4822 122 33496	100nF 10% 63V
2303	4822 122 33496	100nF 10% 63V
2304	4822 122 33496	100nF 10% 63V
2305	4822 122 33496	100nF 10% 63V
2306	4822 122 33496	100nF 10% 63V
2307	4822 122 33496	100nF 10% 63V
2308	4822 124 40196	220μF 20% 16V
2309	4822 124 40196	220μF 20% 16V
2310	4822 122 33496	100nF 10% 63V
2311	4822 122 33496	100nF 10% 63V
2312	4822 122 33806	820pF 10% 63V
2313	4822 122 33806	820pF 10% 63V
2314	5322 121 70125	130pF 630V

2315	5322 121 70125	130pF 630V
2316	5322 121 70125	130pF 630V
2317	5322 121 70125	130pF 630V
2318	4822 122 33496	100nF 10% 63V
2319	4822 122 33496	100nF 10% 63V
2320	4822 121 43861	56pF 1% 630V
2321	4822 121 43861	56pF 1% 630V
2322	4822 122 33496	100nF 10% 63V
2323	4822 122 33496	100nF 10% 63V
2324	4822 124 22473	100µF 25V
2325	4822 124 22473	100µF 25V
2326	4822 124 22473	100µF 25V
2327	4822 124 22473	100µF 25V
2340	4822 121 42783	2.2nF 1% 250V
2341	4822 121 42783	2.2nF 1% 250V
2342	5322 121 50999	470pF 1% 400V
2343	5322 121 50999	470pF 1% 400V
2344	4822 122 33496	100nF 10% 63V
2345	4822 122 33496	100nF 10% 63V
2346	4822 124 22473	100µF 25V
2347	4822 124 22473	100µF 25V
2348	4822 124 22339	100µF 16V
2349	4822 124 22339	100µF 16V
2350	4822 122 32575	220pF 10% 500V
2351	4822 122 32575	220pF 10% 500V
2352	4822 122 32575	220pF 10% 500V
2353	4822 122 32575	220pF 10% 500V
2501⚠	4822 126 10454	3,3nF 20% 400V
2511	4822 122 33809	22nF 20% 50V
2512	4822 122 33809	22nF 20% 50V
2513	4822 122 33809	22nF 20% 50V
2514	4822 122 33809	22nF 20% 50V
2515	4822 122 33809	22nF 20% 50V
2516	4822 122 33809	22nF 20% 50V
2517	4822 122 33809	22nF 20% 50V
2518	4822 122 33809	22nF 20% 50V
2520	4822 124 23183	4700µF 20% 16V
2523	4822 124 41576	2,2µF 20% 50V
2525	4822 124 23268	3300µF 20% 16V
2526	4822 122 33809	22nF 20% 50V
2527	4822 122 33809	22nF 20% 50V
2528	4822 124 41577	4,7µF 20% 50V
2530	4822 122 33809	22nF 20% 50V
2531	4822 122 33809	22nF 20% 50V
2532	4822 124 23172	470µF 20% 50V
2533	4822 122 33809	22nF 20% 50V
2534	4822 122 33809	22nF 20% 50V
2535	4822 124 41576	2,2µF 20% 50V
2536	4822 124 23172	470µF 20% 50V
2537	4822 122 33809	22nF 20% 50V
2538	4822 122 33809	22nF 20% 50V
2539	4822 124 41577	4,7µF 20% 50V
2540	4822 122 33496	100nF 10% 63V
2542	4822 122 33809	22nF 20% 50V
2543	4822 122 33809	22nF 20% 50V
2544	4822 124 23172	470µF 20% 50V
2545	4822 122 33809	22nF 20% 50V
2546	4822 122 33809	22nF 20% 50V
2547	4822 122 33809	22nF 20% 50V
2548	4822 124 41577	4,7µF 20% 50V
2549	4822 122 33809	22nF 20% 50V
2561	4822 121 51252	470nF 5% 63V
2562	5322 121 42661	330nF 5% 63V
2563	4822 124 23172	470µF 20% 50V
2601	4822 124 40272	33µF 20% 16V
2602	4822 122 33809	22nF 20% 50V
2603	4822 124 40272	33µF 20% 16V
2604	4822 122 33809	22nF 20% 50V
2605	4822 122 33496	100nF 10% 63V
2704	4822 122 33809	22nF 20% 50V
2705	4822 124 41576	2,2µF 20% 50V
2706	4822 122 33809	22nF 20% 50V
2707	4822 122 33809	22nF 20% 50V
2708	4822 124 40272	33µF 20% 16V
2733	4822 122 33809	22nF 20% 50V
2751	4822 122 33809	22nF 20% 50V
2761	4822 124 40433	47µF 20% 25V
2762	4822 122 33809	22nF 20% 50V

RESISTORS

3000	4822 051 20472	4k7 5% 0,1W
3001	4822 051 20104	100k 5% 0,1W
3002⚠	4822 052 10478	4Ω7 5% 0,33W
3003⚠	4822 052 10478	4Ω7 5% 0,33W
3004	4822 050 21503	15k 1% 0,6W
3005	4822 051 10101	100Ω 2% 0,25W
3006	4822 050 21002	1k 1% 0,6W
3007	4822 050 22403	24k 1% 0,6W
3008	4822 050 25602	5k6 1% 0,6W
3009	4822 051 20103	10k 5% 0,1W
3025	4822 050 24703	47k 1% 0,6W
3026	4822 050 22203	22k 1% 0,6W
3027	4822 050 21802	1k8 1% 0,6W
3029	4822 050 25102	5k1 1% 0,6W
3030	4822 051 20224	220k 5% 0,1W
3031	4822 050 21203	12k 1% 0,6W
3032	4822 050 21504	150k 1% 0,6W
3033	4822 051 20223	22k 5% 0,1W
3041	4822 050 21103	11k 1% 0,6W
3042	4822 050 21504	150k 1% 0,6W
3043	4822 050 21204	120k 1% 0,6W
3044	4822 116 52234	100k 5% 0,5W
3045	4822 050 23904	390k 1% 0,6W
3046	4822 050 25603	56k 1% 0,6W
3047⚠	4822 052 10828	8Ω2 5% 0,33W

MAIN PANEL

MISCELLANEOUS

21	⚠	4822 256 30274	FUSE HOLDER
	⚠	4822 492 63076	CLAMPING SPRING
1101		4822 265 30525	CONNECTOR 2P
1200		4822 218 21019	OPTICAL OUT
1201		4822 267 31626	DIGITAL OUT SOCKET
1250		4822 242 71349	CRYSTAL 11.2896MHz
1301		4822 267 31755	ANALOG OUT SOCKET
1302		4822 267 50621	CONNECTOR 7P
1503	⚠	4822 276 13216	MAINS SWITCH
1530	⚠	4822 071 55001	FUSE 500mA
1700		4822 242 72527	RESONATOR 4MHz
1702		4822 265 41115	CONNECTOR 15P
1704		4822 267 31728	ESI BUS SOCKET
1705		4822 267 31728	ESI BUS SOCKET
1731		4822 242 72527	RESONATOR 4MHz

CAPACITORS

2000	4822 122 33809	22nF 20% 50V
2001	5322 122 32268	470pF 10% 50V
2003	4822 122 33496	100nF 10% 63V
2006	4822 122 33496	100nF 10% 63V
2007	4822 122 33175	2,2nF 20% 50V
2008	4822 122 32542	47nF 10% 63V
2009	5322 122 32531	100pF 5% 50V
2010	4822 122 33177	10nF 20% 50V
2011	5322 122 34123	1nF 10% 50V
2012	4822 121 42408	220nF 5% 63V
2013	4822 121 51252	470nF 5% 63V
2014	4822 122 33575	220pF 5%NPO 50V
2015	5322 122 34123	1nF 10% 50V
2021	4822 121 51321	8,2nF 1% 63V
2022	4822 121 51321	8,2nF 1% 63V
2023	4822 124 40433	47µF 20% 25V
2025	5322 121 42661	330nF 5% 63V
2026	4822 122 33342	33nF 10% 63V
2027	4822 122 33342	33nF 10% 63V
2028	4822 121 42408	220nF 5% 63V
2029	4822 121 42408	220nF 5% 63V
2030	4822 122 33496	100nF 10% 63V
2031	4822 122 33496	100nF 10% 63V
2041	4822 121 51252	470nF 5% 63V
2042	5322 126 10223	4,7nF 10% 63V
2043	4822 121 42408	220nF 5% 63V
2044	4822 122 33496	100nF 10% 63V
2061	4822 121 51252	470nF 5% 63V
2062	4822 122 33496	100nF 10% 63V
2063	4822 122 33809	22nF 20% 50V
2064	4822 124 40433	47µF 20% 25V
2066	4822 124 40433	47µF 20% 25V
2071	4822 122 33496	100nF 10% 63V
2081	4822 122 33575	220pF 5%NPO 50V
2082	4822 124 40433	47µF 20% 25V
2088	4822 121 43526	47nF 5% 250V
2100	5322 122 32452	47pF 5% 63V
2101	4822 122 33175	2,2nF 20% 50V
2102	4822 122 33809	22nF 20% 50V
2103	4822 124 40433	47µF 20% 25V
2104	4822 122 33809	22nF 20% 50V
2105	4822 121 51252	470nF 5% 63V
2107	4822 124 40244	2,2µF 20% 63V
2108	4822 124 40433	47µF 20% 25V
2109	4822 122 33809	22nF 20% 50V
2131	4822 122 33893	18nF 10% 63V
2132	5322 121 42661	330nF 5% 63V
2133	4822 122 33175	2,2nF 20% 50V
2134	4822 122 33809	22nF 20% 50V
2135	4822 124 40196	220µF 20% 16V
2136	4822 122 33809	22nF 20% 50V
2137	4822 124 40196	220µF 20% 16V
2200	5322 122 31863	330pF 5% 50V
2201	4822 122 33809	22nF 20% 50V
2202	4822 124 40433	47µF 20% 25V
2203	4822 122 33809	22nF 20% 50V
2204	4822 122 33809	22nF 20% 50V
2205	5322 122 32452	47pF 5% 63V
2211	4822 124 40433	47µF 20% 25V
2212	4822 122 33809	22nF 20% 50V
2213	4822 122 33809	22nF 20% 50V
2214	4822 122 33496	100nF 10% 63V
2215	4822 122 33809	22nF 20% 50V
2216	5322 122 32452	47pF 5% 63V
2217	4822 122 33809	22nF 20% 50V
2218	4822 122 33809	22nF 20% 50V
2219	4822 124 40433	47µF 20% 25V
2250	4822 122 33496	100nF 10% 63V
2251	4822 124 40433	47µF 20% 25V
2252	4822 122 33496	100nF 10% 63V
2253	5322 122 32452	47pF 5% 63V
2254	5322 122 32452	47pF 5% 63V
2256	5322 122 32452	47pF 5% 63V
2300	4822 122 33496	100nF 10% 63V
2302	4822 122 33496	100nF 10% 63V
2303	4822 122 33496	100nF 10% 63V
2304	4822 122 33496	100nF 10% 63V
2305	4822 122 33496	100nF 10% 63V
2306	4822 122 33496	100nF 10% 63V
2307	4822 122 33496	100nF 10% 63V
2308	4822 124 40196	220µF 20% 16V
2309	4822 124 40196	220µF 20% 16V
2310	4822 122 33496	100nF 10% 63V
2311	4822 122 33496	100nF 10% 63V

2312	4822 122 33806	820pF 10% 63V
2313	4822 122 33806	820pF 10% 63V
2314	5322 121 70125	130pF 630V
2315	5322 121 70125	130pF 630V
2316	5322 121 70125	130pF 630V
2317	5322 121 70125	130pF 630V
2318	4822 122 33496	100nF 10% 63V
2319	4822 122 33496	100nF 10% 63V
2320	4822 121 43861	56pF 1% 630V
2321	4822 121 43861	56pF 1% 630V
2322	4822 122 33496	100nF 10% 63V
2323	4822 122 33496	100nF 10% 63V
2324	4822 124 22473	100µF 25V
2325	4822 124 22473	100µF 25V
2326	4822 124 22473	100µF 25V
2327	4822 124 22473	100µF 25V
2340	4822 121 42783	2.2nF 1% 250V
2341	4822 121 42783	2.2nF 1% 250V
2342	5322 121 50999	470pF 1% 400V
2343	5322 121 50999	470pF 1% 400V
2344	4822 122 33496	100nF 10% 63V
2345	4822 122 33496	100nF 10% 63V
2346	4822 124 22473	100µF 25V
2347	4822 124 22473	100µF 25V
2348	4822 124 22339	100µF 16V
2349	4822 124 22339	100µF 16V
2350	4822 122 33575	220pF 5%NPO 50V
2351	4822 122 33575	220pF 5%NPO 50V
2352	4822 122 33575	220pF 5%NPO 50V
2353	4822 122 33575	220pF 5%NPO 50V
2501	4822 126 10454	3,3nF 20% 400V
2511	4822 122 33809	22nF 20% 50V
2512	4822 122 33809	22nF 20% 50V
2513	4822 122 33809	22nF 20% 50V
2514	4822 122 33809	22nF 20% 50V
2515	4822 122 33809	22nF 20% 50V
2516	4822 122 33809	22nF 20% 50V
2517	4822 122 33809	22nF 20% 50V
2518	4822 122 33809	22nF 20% 50V
2520	4822 124 41458	4700µF 20% 16V
2523	4822 124 40244	2,2µF 20% 63V
2525	4822 124 80294	3300µF 20% 16V
2526	4822 122 33809	22nF 20% 50V
2527	4822 122 33809	22nF 20% 50V
2528	4822 124 40246	4,7µF 20% 63V
2530	4822 122 33809	22nF 20% 50V
2531	4822 122 33809	22nF 20% 50V
2532	4822 124 41184	470µF 20% 63V
2533	4822 122 33809	22nF 20% 50V
2534	4822 122 33809	22nF 20% 50V
2535	4822 124 40244	2U2 20% 50V
2536	4822 124 41184	470U 20% 50V
2537	4822 122 33809	22nF 20% 50V

2538	4822 122 33809	22nF 20% 50V
2539	4822 124 40246	4,7µF 20% 63V
2540	4822 122 33496	100nF 10% 63V
2542	4822 122 33809	22nF 20% 50V
2543	4822 122 33809	22nF 20% 50V
2544	4822 124 42392	470µF 20% 50V
2545	4822 122 33809	22nF 20% 50V
2546	4822 122 33809	22nF 20% 50V
2547	4822 122 33809	22nF 20% 50V
2548	4822 124 40246	4,7µF 20% 63V
2549	4822 122 33809	22nF 20% 50V
2561	4822 121 51252	470nF 5% 63V
2562	5322 121 42661	330nF 5% 63V
2563	4822 124 42392	470µF 20% 50V
2601	4822 124 40433	47µF 20% 25V
2602	4822 122 33809	22nF 20% 50V
2603	4822 124 40433	47µF 20% 25V
2604	4822 122 33809	22nF 20% 50V
2605	4822 122 33496	100nF 10% 63V
2704	4822 122 33809	22nF 20% 50V
2705	4822 124 40244	2,2µF 20% 63V
2706	4822 122 33809	22nF 20% 50V
2707	4822 122 33809	22nF 20% 50V
2708	4822 124 40433	47µF 20% 25V
2733	4822 122 33809	22nF 20% 50V
2751	4822 122 33809	22nF 20% 50V
2761	4822 124 40433	47µF 20% 25V
2762	4822 122 33809	22nF 20% 50V
2763	4822 122 33809	22nF 20% 50V

RESISTORS

3000	4822 051 20472	4k7 5% 0,1W
3001	4822 051 20104	100k 5% 0,1W
3002 ⚠	4822 052 10478	4Ω7 5% 0,33W
3003 ⚠	4822 052 10478	4Ω7 5% 0,33W
3004	4822 050 21503	15k 1% 0,6W
3005	4822 116 52175	100Ω 5% 0,5W
3006	4822 050 11002	1k 1% 0,4W
3007	4822 050 22403	24k 1% 0,6W
3008	4822 050 25602	5k6 1% 0,6W
3009	4822 117 10833	10k 1% 0,1W
3025	4822 050 24703	47k 1% 0,6W
3026	4822 050 22203	22k 1% 0,6W
3027	4822 050 21802	1k8 1% 0,6W
3029	4822 050 25102	5k1 1% 0,6W
3030	4822 051 20224	220k 5% 0,1W
3031	4822 116 52238	12k 5% 0,5W
3032	4822 116 52245	150k 5% 0,5W
3033	4822 051 20223	22k 5% 0,1W
3041	4822 050 21103	11k 1% 0,6W
3042	4822 050 21504	150k 1% 0,6W

3043		4822 050 21204	120k	1%	0,6W
3044		4822 116 52234	100k	5%	0,5W
3045		4822 050 23904	390k	1%	0,6W
3046		4822 050 25603	56k	1%	0,6W
3047	▲	4822 052 10828	8Ω2	5%	0,33W
3048	▲	4822 052 10229	22Ω	5%	0,33W
3049		4822 050 23305	3M3	1%	0,6W
3061		4822 051 20332	3k3	5%	0,1W
3062		4822 050 23002	3k	1%	0,6W
3063		4822 050 23308	3Ω3	1%	0,6W
3064	▲	4822 052 10339	33Ω	5%	0,33W
3065	▲	4822 052 10108	1Ω	5%	0,33W
3066	▲	4822 052 10108	1Ω	5%	0,33W
3067		4822 116 52175	100Ω	5%	0,5W
3069		4822 116 52238	12k	5%	0,5W
3070		4822 116 52238	12k	5%	0,5W
3071		4822 051 20223	22k	5%	0,1W
3072		4822 116 52257	22k	5%	0,5W
3074		4822 051 10008	0Ω	5%	0,25W
3081	▲	4822 052 10189	18Ω	5%	0,33W
3082	▲	4822 052 10129	12Ω	5%	0,33W
3083		4822 051 20101	100Ω	5%	0,1W
3094		4822 116 52251	18k	5%	0,5W
3100		4822 116 52256	2k2	5%	0,5W
3101		4822 051 20223	22k	5%	0,1W
3102	▲	4822 052 10478	4Ω7	5%	0,33W
3105		4822 051 20759	75Ω	5%	0,1W
3106		4822 116 52276	3k9	5%	0,5W
3107		4822 116 52306	9k1	5%	0,5W
3108		4822 051 20162	1k6	5%	0,1W
3109	▲	4822 052 10478	4Ω7	5%	0,33W
3116		4822 116 52257	22k	5%	0,5W
3131		4822 116 52283	4k7	5%	0,5W
3132		4822 116 52284	47k	5%	0,5W
3133		4822 116 52234	100k	5%	0,5W
3134		4822 051 20913	91k	5%	0,1W
3135		4822 116 52269	3k3	5%	0,5W
3136		4822 116 52289	5k6	5%	0,5W
3137		4822 116 52245	150k	5%	0,5W
3138		4822 116 52304	82k	5%	0,5W
3139		4822 116 52175	100Ω	5%	0,5W
3140	▲	4822 052 10478	4Ω7	5%	0,33W
3141	▲	4822 052 10478	4Ω7	5%	0,33W
3142	▲	4822 052 10478	4Ω7	5%	0,33W
3143	▲	4822 052 10478	4Ω7	5%	0,33W
3144		4822 116 52298	680k	5%	0,5W
3145		4822 116 52289	5k6	5%	0,5W
3146		4822 116 52271	33k	5%	0,5W
3147		4822 116 52283	4k7	5%	0,5W
3148		4822 116 52283	4k7	5%	0,5W
3149		4822 116 52207	1k2	5%	0,5W
3150		4822 116 52248	160k	5%	0,5W
3151		4822 116 52283	4k7	5%	0,5W
3201	▲	4822 052 10478	4Ω7	5%	0,33W
3211	▲	4822 052 10478	4Ω7	5%	0,33W
3212		4822 116 52226	560Ω	5%	0,5W
3213		4822 051 20621	620Ω	5%	0,1W
3214		4822 116 52257	22k	5%	0,5W
3215		4822 051 20472	4k7	5%	0,1W
3216		4822 051 20223	22k	5%	0,1W
3217	▲	4822 052 10478	4Ω7	5%	0,33W
3218		4822 051 20822	8k2	5%	0,1W
3219		4822 116 52257	22k	5%	0,5W
3226		4822 051 20101	100Ω	5%	0,1W
3227		4822 051 20101	100Ω	5%	0,1W
3250	▲	4822 052 10478	4Ω7	5%	0,33W
3251		4822 051 20224	220k	5%	0,1W
3252		4822 051 10102	1k	2%	0,25W
3253		4822 051 20101	100Ω	5%	0,1W
3255		4822 051 20105	1M	5%	0,1W
3300	▲	4822 052 10109	10Ω	5%	0,33W
3302	▲	4822 052 10109	10Ω	5%	0,33W
3303	▲	4822 052 10109	10Ω	5%	0,33W
3304	▲	4822 052 10109	10Ω	5%	0,33W
3305	▲	4822 052 10109	10Ω	5%	0,33W
3306		4822 116 52243	1k5	5%	0,5W
3307		4822 116 52243	1k5	5%	0,5W
3308		4822 116 52269	3k3	5%	0,5W
3309		4822 116 52269	3k3	5%	0,5W
3310		4822 050 25601	560Ω	1%	0,6W
3311		4822 050 25601	560Ω	1%	0,6W
3312		4822 050 23302	3k3	1%	0,6W
3313		4822 050 23302	3k3	1%	0,6W
3314		4822 050 22003	20k	1%	0,6W
3315		4822 050 22003	20k	1%	0,6W
3316		4822 050 22003	20k	1%	0,6W
3317		4822 050 22003	20k	1%	0,6W
3318	▲	4822 052 10478	4Ω7	5%	0,33W
3319	▲	4822 052 10478	4Ω7	5%	0,33W
3320		4822 050 23302	3k3	1%	0,6W
3321		4822 050 23302	3k3	1%	0,6W
3322		4822 050 23602	3k6	1%	0,6W
3323		4822 050 23602	3k6	1%	0,6W
3324		4822 050 21003	10k	1%	0,6W
3325		4822 050 21003	10k	1%	0,6W
3326		4822 050 21103	11k	1%	0,6W
3327		4822 050 21103	11k	1%	0,6W
3328	▲	4822 052 10229	22Ω	5%	0,33W
3329	▲	4822 052 10229	22Ω	5%	0,33W
3330		4822 050 22402	2k4	1%	0,6W
3331		4822 050 22402	2k4	1%	0,6W
3340		4822 050 22402	2k4	1%	0,6W
3341		4822 050 22402	2k4	1%	0,6W
3342	▲	4822 052 10229	22Ω	5%	0,33W
3343	▲	4822 052 10229	22Ω	5%	0,33W
3344		4822 117 10833	10k	1%	0,1W
3345		4822 117 10833	10k	1%	0,1W

3346	4822 116 52175	100Ω 5% 0,5W
3347	4822 116 52175	100Ω 5% 0,5W
3348	4822 116 52175	100Ω 5% 0,5W
3349	4822 116 52175	100Ω 5% 0,5W
3350	4822 116 52207	1k2 5% 0,5W
3351	4822 116 52207	1k2 5% 0,5W
3352	4822 116 52256	2k2 5% 0,5W
3353	4822 116 52256	2k2 5% 0,5W
3356	4822 116 52175	100Ω 5% 0,5W
3357	4822 116 52175	100Ω 5% 0,5W
3358	4822 051 20222	2k2 5% 0,1W
3359	4822 051 20222	2k2 5% 0,1W
3360	4822 051 20472	4k7 5% 0,1W
3361	4822 051 20472	4k7 5% 0,1W
3362	4822 116 52233	10k 5% 0,5W
3363	4822 116 52233	10k 5% 0,5W
3366	4822 116 52283	4k7 5% 0,5W
3367	4822 116 52283	4k7 5% 0,5W
3368	4822 116 52258	220k 5% 0,5W
3369	4822 116 52258	220k 5% 0,5W
3370	4822 116 52285	470k 5% 0,5W
3371	4822 116 52285	470k 5% 0,5W
3520	4822 050 11002	1k 1% 0,4W
3521	4822 050 11002	1k 1% 0,4W
3522 ▲	4822 052 10108	1Ω 5% 0,33W
3523	4822 116 52233	10k 5% 0,5W
3524 ▲	4822 052 10229	22Ω 5% 0,33W
3525	4822 116 52269	3k3 5% 0,5W
3526	4822 116 52283	4k7 5% 0,5W
3527	4822 116 52257	22k 5% 0,5W
3528	4822 116 52283	4k7 5% 0,5W
3529	4822 116 52175	100Ω 5% 0,5W
3530	4822 051 20331	330Ω 5% 0,1W
3531	4822 051 10102	1k 2% 0,25W
3541	4822 116 52269	3k3 5% 0,5W
3561	4822 050 11002	1k 1% 0,4W
3562	4822 117 10834	47k 1% 0,1W
3563	4822 050 22205	2M2 1% 0,6W
3564	4822 116 52233	10k 5% 0,5W
3565	4822 116 52271	33k 5% 0,5W
3566	4822 116 52258	220k 5% 0,5W
3567	4822 050 11002	1k 1% 0,4W
3600	4822 050 25102	5k1 1% 0,6W
3602	4822 116 52233	10k 5% 0,5W
3603	4822 116 52233	10k 5% 0,5W
3604	4822 116 52233	10k 5% 0,5W
3605	4822 116 52233	10k 5% 0,5W
3606 ▲	4822 052 10108	1Ω 5% 0,33W
3607 ▲	4822 052 10108	1Ω 5% 0,33W
3608 ▲	4822 052 10229	22Ω 5% 0,33W
3701	4822 051 20224	220k 5% 0,1W
3702 ▲	4822 052 10228	2Ω2 5% 0,33W
3703	4822 051 20223	22k 5% 0,1W

3705	4822 051 20223	22k 5% 0,1W
3708	4822 051 20223	22k 5% 0,1W
3711	4822 051 20223	22k 5% 0,1W
3721	4822 051 20221	220Ω 5% 0,1W
3722	4822 051 10102	1k 2% 0,25W
3723	4822 051 20223	22k 5% 0,1W
3731	4822 051 20224	220k 5% 0,1W
3732	4822 051 20332	3k3 5% 0,1W
3734	4822 051 20223	22k 5% 0,1W
3735	4822 116 52257	22k 5% 0,5W
3736	4822 051 20223	22k 5% 0,1W
3741	5322 111 90473	RES.NETWORK
3742	4822 051 20223	22k 5% 0,1W
3747	4822 050 11002	1k 1% 0,4W
3748	4822 116 52257	22k 5% 0,5W
3749	4822 116 52219	330Ω 5% 0,5W
3750	4822 051 20223	22k 5% 0,1W
3751	4822 117 10833	10k 1% 0,1W
3752	4822 117 10833	10k 1% 0,1W
3761 ▲	4822 052 10109	10Ω 5% 0,33W
3762	4822 051 20183	18k 5% 0,1W
3763	4822 117 10834	47k 1% 0,1W
3764	4822 116 52175	100Ω 5% 0,5W
3765	4822 117 10834	47k 1% 0,1W
3766	4822 117 10834	47k 1% 0,1W
3767	4822 116 52284	47k 5% 0,5W
3768	4822 116 52284	47k 5% 0,5W
3800	4822 051 10008	0Ω 5% 0,25W
....	....	....
3838	4822 051 10008	0Ω 5% 0,25W

COILS

5211	4822 148 80281	DIG.OUT TRANSFORMER
5300	4822 157 50964	100μH
5301	4822 157 50964	100μH
5502 ▲	4822 214 51841	MAINS FILTER

3048▲	4822 052 10229	22Ω 5% 0,33W
3049	4822 050 23305	3M3 1% 0,6W
3061	4822 051 20332	3k3 5% 0,1W
3062	4822 050 23002	3k 1% 0,6W
3063	4822 050 23308	3Ω3 1% 0,6W
3064▲	4822 052 10339	33Ω 5% 0,33W
3065▲	4822 052 10108	1Ω 5% 0,33W
3066▲	4822 052 10108	1Ω 5% 0,33W
3067	4822 051 10101	100Ω 2% 0,25W
3071	4822 051 20223	22k 5% 0,1W
3072	4822 050 22203	22k 1% 0,6W
3074	4822 051 10008	chip jumper 0Ω
3081▲	4822 052 10189	18Ω 5% 0,33W
3082▲	4822 052 10129	12Ω 5% 0,33W
3083	4822 051 20101	100Ω 5% 0,1W
3094	4822 050 21803	18k 1% 0,6W
3100	4822 050 22202	2k2 1% 0,6W
3101	4822 051 20223	22k 5% 0,1W
3102▲	4822 052 10478	4Ω7 5% 0,33W
3105	4822 051 20759	75Ω 5% 0,1W
3106	4822 050 23902	3k9 1% 0,6W
3107	4822 050 29102	9k1 1% 0,6W
3108	4822 051 20162	1k6 5% 0,1W
3109▲	4822 052 10478	4Ω7 5% 0,33W
3110	5322 116 51882	0Ω
3111	5322 116 51882	0Ω
3112	5322 116 51882	0Ω
3113	5322 116 51882	0Ω
3114	5322 116 51882	0Ω
3115	5322 116 51882	0Ω
3116	4822 050 22203	22k 1% 0,6W
3131	4822 050 24702	4k7 1% 0,6W
3132	4822 050 24703	47k 1% 0,6W
3133	4822 116 52234	100k 5% 0,5W
3134	4822 051 20913	91k 5% 0,1W
3135	4822 050 23302	3k3 1% 0,6W
3136	4822 050 15602	5k6 1% 0,4W
3137	4822 050 21504	150k 1% 0,6W
3138	4822 050 28203	82k 1% 0,6W
3139	4822 051 10101	100Ω 2% 0,25W
3140▲	4822 052 10478	4Ω7 5% 0,33W
3141▲	4822 052 10478	4Ω7 5% 0,33W
3142▲	4822 052 10478	4Ω7 5% 0,33W
3143▲	4822 052 10478	4Ω7 5% 0,33W
3144	4822 050 26804	680k 1% 0,6W
3145	4822 050 15602	5k6 1% 0,4W
3146	4822 050 13303	33k 1% 0,4W
3147	4822 050 24702	4k7 1% 0,6W
3148	4822 050 24702	4k7 1% 0,6W
3149	4822 051 10122	1k2 2% 0,25W

3150	4822 050 22004	200k 1% 0,6W
3201▲	4822 052 10478	4Ω7 5% 0,33W
3211▲	4822 052 10478	4Ω7 5% 0,33W
3212	4822 051 10561	560Ω 2% 0,25W
3213	4822 051 20621	620Ω 5% 0,1W
3214	4822 050 22203	22k 1% 0,6W
3215	4822 051 20223	22k 5% 0,1W
3216	4822 051 20223	22k 5% 0,1W
3217▲	4822 052 10478	4Ω7 5% 0,33W
3218	4822 051 20822	8k2 5% 0,1W
3219	4822 050 22203	22k 1% 0,6W
3221	5322 116 51882	0Ω
3222	5322 116 51882	0Ω
3223	5322 116 51882	0Ω
3224	5322 116 51882	0Ω
3225	5322 116 51882	0Ω
3250▲	4822 052 10478	4Ω7 5% 0,33W
3251	4822 051 20224	220k 5% 0,1W
3252	4822 051 10102	1k 2% 0,25W
3255	4822 051 20105	1M 5% 0,1W
3300▲	4822 052 10109	10Ω 5% 0,33W
3302▲	4822 052 10109	10Ω 5% 0,33W
3303▲	4822 052 10109	10Ω 5% 0,33W
3304▲	4822 052 10109	10Ω 5% 0,33W
3305▲	4822 052 10109	10Ω 5% 0,33W
3306	4822 050 21502	1k5 1% 0,6W
3307	4822 050 21502	1k5 1% 0,6W
3308	4822 050 23302	3k3 1% 0,6W
3309	4822 050 23302	3k3 1% 0,6W
3310	4822 050 25601	560Ω 1% 0,6W
3311	4822 050 25601	560Ω 1% 0,6W
3312	4822 050 23302	3k3 1% 0,6W
3313	4822 050 23302	3k3 1% 0,6W
3314	4822 050 22003	20k 1% 0,6W
3315	4822 050 22003	20k 1% 0,6W
3316	4822 050 22003	20k 1% 0,6W
3317	4822 050 22003	20k 1% 0,6W
3318▲	4822 052 10478	4Ω7 5% 0,33W
3319▲	4822 052 10478	4Ω7 5% 0,33W
3320	4822 050 23302	3k3 1% 0,6W
3321	4822 050 23302	3k3 1% 0,6W
3322	4822 050 23302	3k3 1% 0,6W
3323	4822 050 23302	3k3 1% 0,6W
3324	4822 050 21003	10k 1% 0,6W
3325	4822 050 21003	10k 1% 0,6W
3326	4822 050 21003	10k 1% 0,6W
3327	4822 050 21003	10k 1% 0,6W
3328▲	4822 052 10229	22Ω 5% 0,33W
3329▲	4822 052 10229	22Ω 5% 0,33W
3330	4822 050 22402	2k4 1% 0,6W

COILS

5211	4822 148 80281	DIG.OUT TRANSFORMER
5300	4822 156 21452	100µH
5301	4822 156 21452	100µH

DIODES

6061	4822 130 30861	BZX79-C7V5
6062	4822 130 30861	BZX79-C7V5
6511	5322 130 30684	1N4002
6512	5322 130 30684	1N4002
6513	5322 130 30684	1N4002
6514	5322 130 30684	1N4002
6515	5322 130 30684	1N4002
6516	5322 130 30684	1N4002
6517	5322 130 30684	1N4002
6518	5322 130 30684	1N4002
6521	5322 130 30684	1N4002
6522	4822 130 34173	BZX79-C5V6
6541	5322 130 30684	1N4002
6543	4822 130 34278	BZX79-F6V8
6544	4822 130 34173	BZX79-C5V6
6561	4822 130 34278	BZX79-F6V8
6562	4822 130 30621	1N4148
6563	4822 130 30621	1N4148
6564	4822 130 30621	1N4148
6565	5322 130 30684	1N4002
6566	5322 130 30684	1N4002
6567	4822 130 31981	BZX79-C3V9
6568	4822 130 30621	1N4148
6721	4822 130 31981	BZX79-C3V9

TRANSISTORS & IC's

7001	4822 209 73234	TDA8808T/C3
7002	4822 209 73235	TDA8809T/C2
7003	4822 209 72587	TCA0372DP2-
7004	5322 130 44349	BC635
7005	4822 209 30719	MC74HC00AD
7100	4822 209 61759	SAA7310GP/H5
7101	4822 130 42131	BF550
7102⚠	4822 209 70422	MN4264-15
7131	4822 209 83274	NJM4560D
7132	4822 130 44121	BC338
7133	4822 130 44104	BC328
7134	5322 130 42012	BC858A
7135	5322 130 42012	BC858A
7201	4822 209 30939	SM5840AS
7202	5322 209 12099	MC74HC164D
7203	5322 209 12099	MC74HC164D
7204	4822 209 30739	MC74HC04AD
7211	4822 209 62588	PCF3523P
7212	4822 130 61207	BC848
7213	4822 209 31284	MC74HC08ADR2
7250	4822 209 31356	SAA7350
7300	4822 209 31355	TDA1547
7302	5322 209 86234	NE5532N
7303	5322 209 86234	NE5532N
7304	4822 130 42696	BC818-25
7305	4822 130 42696	BC818-25
7306	4822 130 42696	BC818-25
7307	4822 130 42696	BC818-25
7308	4822 130 61207	BC848
7309	4822 130 61207	BC848
7310	5322 130 42012	BC858
7311	5322 130 42012	BC858
7312	4822 130 42696	BC818-25
7313	4822 130 42696	BC818-25
7314	4822 130 42633	BSR56
7315	4822 130 42633	BSR56
7522⚠	4822 209 73233	MC79L05ACP
7526	4822 209 31354	PQ05ΩF11
7527	4822 209 80889	MC78L15ACP
7528	5322 209 62115	MC79L15AC
7529	5322 130 42012	BC858
7530	4822 130 61207	BC848
7531	5322 130 44349	BC635
7541	4822 209 31257	MC79L24ACP
7561⚠	5322 130 41982	BC848B
7562	5322 130 42012	BC858
7600	4822 209 72587	TCA0372DP2-
7701	4822 209 30938	MC68HC05C8P-ZC405027
7702	4822 209 80891	MC78M05CT
7721	5322 130 42012	BC858
7731	4822 209 31351	MC68HC05D9P-P138
7732	5322 130 42012	BC858
7733	4822 130 61207	BC848
7751	4822 209 62524	X24C16P
7761	5322 130 42012	BC858
7762	4822 130 61207	BC848
7763	4822 130 61207	BC848

DISPLAY & KEYBOARD PANEL

MISCELLANEOUS

	4822 256 91848	DISPLAY HOLDER
1310	4822 267 50621	CONNECTOR 7P
BU-5	4822 267 31453	HEADPHONE SOCKET
1401	4822 242 81002	RESONATOR 6MHz
1402	4822 130 91115	DISPLAY
1403	4822 265 41115	CONNECTOR 15P
1404	4822 267 50621	CONNECTOR 7P
1405	4822 267 40624	CONNECTOR 5P
1406	4822 267 50621	CONNECTOR 7P
1407	4822 267 40624	CONNECTOR 5P
1410	4822 276 13114	TACT SWITCH
1411	4822 276 13114	TACT SWITCH
1412	4822 276 13114	TACT SWITCH
1413	4822 276 13114	TACT SWITCH
1414	4822 276 13213	TACT SWITCH
1415	4822 276 13213	TACT SWITCH
1416	4822 276 13114	TACT SWITCH
1417	4822 276 13213	TACT SWITCH
1418	4822 276 13213	TACT SWITCH
1419	4822 276 13213	TACT SWITCH
1420	4822 276 13213	TACT SWITCH
1421	4822 276 13213	TACT SWITCH
1422	4822 276 13114	TACT SWITCH
1423	4822 276 13114	TACT SWITCH
1424	4822 276 13114	TACT SWITCH
1425	4822 276 13114	TACT SWITCH
1426	4822 276 13114	TACT SWITCH
1451	4822 214 51772	TACT SWITCH

CAPACITORS

2401	5322 124 21643	22µF 20% 40V
2402	4822 122 10166	22nF 30% 16V
2403	5322 124 21643	22µF 20% 40V
2404	4822 122 10166	22nF 30% 16V
2405	5322 124 21643	22µF 20% 40V
2406	4822 122 10166	22nF 30% 16V
2420	5322 124 21643	22µF 20% 40V
2421	4822 122 10166	22nF 30% 16V

RESISTORS

3401⚠	4822 052 10478	4Ω7 5% 0,33W
3402⚠	4822 052 10478	4Ω7 5% 0,33W
3403⚠	4822 052 10478	4Ω7 5% 0,33W
3404	4822 050 22203	22k 1% 0,6W
3405	4822 050 22203	22k 1% 0,6W
3406	4822 050 22203	22k 1% 0.6W
3407	4822 050 22203	22k 1% 0.6W
3408	4822 050 22203	22k 1% 0.6W
3409	4822 050 22203	22k 1% 0.6W
3410	4822 116 52234	100k 5% 0.5W
3411	4822 051 10101	100Ω 2% 0.25W
3412	4822 116 52234	100k 5% 0.5W
3413	4822 051 10101	100Ω 2% 0.25W
3414	5322 111 90473	8x10k 2% NETWORK
3415	4822 116 52235	1M 5% 0,5W
3416	4822 050 21002	1k 1% 0,6W
3417	4822 050 24703	47k 1% 0,6W
3418	4822 050 24702	4k7 1% 0,6W
3419	4822 050 24702	4k7 1% 0.6W
3420⚠	4822 052 10478	4Ω7 5% 0,33W
3421	4822 050 24702	4k7 1% 0,6W

DIODES

6401	4822 130 30621	1N4148
6402	4822 130 30621	1N4148
6403	4822 130 30621	1N4148
6404	4822 130 30621	1N4148
6405	4822 130 30621	1N4148
6406	4822 130 83029	LED CTL-4212N

TRANSISTORS & IC'S

7401	4822 209 31251	TMP47C670P-FTDD007
7403	4822 209 60886	UDN-2580A
7405	4822 130 40941	BC558
7406	4822 130 40941	BC558

HEADPHONE PANEL

MISCELLANEOUS

1310	4822 267 50621	CONNECTOR 7P
BU-5	4822 267 31453	HEADPHONE SOCKET

CAPACITORS

2380	4822 124 41525	100µF 20% 25V
2381	4822 124 41525	100µF 20% 25V
2382	4822 122 10166	22nF 30% 16V
2383	4822 122 10166	22nF 30% 16V

RESISTORS

3381	4822 101 21199	10k LOG POTMETER
3382	4822 116 52264	27k 5% 0,5W
3383	4822 116 52264	27k 5% 0,5W
3384	4822 050 21203	12k 1% 0,6W
3385	4822 050 21203	12k 1% 0,6W
3386	4822 050 21201	120Ω 1% 0,6W
3387	4822 050 21201	120Ω 1% 0,6W
3388	4822 051 10101	100Ω 2% 0,25W
3389	4822 051 10101	100Ω 2% 0,25W
3390⚠	4822 052 10109	10Ω 5% 0,33W
3391⚠	4822 052 10109	10Ω 5% 0,33W
3392	4822 050 22202	2k2 1% 0,6W
3393	4822 050 22202	2k2 1% 0,6W

TRANSISTORS & IC

7380	4822 209 82362	NJM4556D
7382	4822 130 44121	BC338
7383	4822 130 44121	BC338

MISCELLANEOUS

SK-1⚠	4822 276 13216	MAINS SWITCH
21⚠	4822 256 30274	FUSE HOLDER
1501⚠	4822 070 31251	FUSE 125mA
1501⚠	4822 253 30322	FUSE 200mA
5001⚠	4822 146 31101	MAINS TRANSFORMER
5001⚠	4822 146 31103	MAINS TRAFO /17S
5502⚠	4822 214 51841	MAINS FILTER